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MEASUREMENT AND PAYMENT

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SECTION 01025

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1 LUMP SUM PAYMENT ITEMS

1.1.1 General

Payment items for the work of this contract for which contract lump sum payments will be made are listed in the BIDDING SCHEDULE and described below. All costs for items of work, which are not specifically mentioned to be included in a particular lump sum or unit price payment item, shall be included in the listed lump sum item most closely associated with the work involved. The lump sum price and payment made for each item listed shall constitute full compensation for furnishing all plant, labor, materials, and equipment, and performing any associated Contractor quality control, environmental protection, meeting safety requirements, tests and reports, and for performing all work required for which separate payment is not otherwise provided.

1.1.2 Lump Sum Item

a. "Pte. Mouillee-Cell #3, Dike Closure" [Item No. 0001]

(1) Payment will be made for costs associated with mobilization and demobilization. Excavation adjacent to the access channel. Prepared limestone base and core. Earth fill and placement. Filter Fabric and placement. Site restoration.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01100

SPECIAL PROJECT PROCEDURES

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SECTION 01100

SPECIAL PROJECT PROCEDURES

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

U.S. GOVERNMENT CODE OF FEDERAL REGULATIONS (CFR)

33 CFR 320-330	General Regulatory Policies, Permits, Enforcement and Definitions

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only or as otherwise designated. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Accident Prevention Plan

Contractor shall provide an accident prevention plan including an activity hazard analysis to the Contracting Officer within 15 calendar days after receipt of award. Plan shall be in accordance with Contract Clause entitled "ACCIDENT PREVENTION (NOV 1991) - ALTERNATE 1.

Payrolls and Basic Records

Contractor shall submit payrolls and basic records in accordance with the CLAUSE entitled "PAYROLLS AND BASIC RECORDS (FEB 1988)".

Progress Chart; G-AOF

Contractor shall submit progress chart in accordance with the Contract clause entitled "SCHEDULE FOR CONSTRUCTION CONTRACTS (APR 1984)".

Non-listed, Non-Commercially Active Stone or Material Source; G-ECD.

If after award of a contract, the Contractor proposes to furnish stone, or granular materials from non-listed, or non-commercially active sources, the following information and data for each non-listed or non-commercially active source of stone, or granular material shall be furnished forty-five (45) or more calendar days prior to the date the Contractor is scheduled to obtain materials from such source(s).

a. Name and address (Property Owner).

b. Location, site map, and legal description (or appropriate substitute) of the area.

c. Previous land use information.

d. A topographic map of the area.

e. Photographs showing the area proposed for use.

f. Written permission of the owners of the proposed non-listed or non-commercially active sources(s).

g. Written permission of the owners of the access properties involved.

h. All data required to assess potential environmental impacts. This information is required in order to determine the necessity for environmental documentation for any non-commercially active, non-listed source(s).

i. Documentation of coordination of the use of proposed non-commercially active, non-listed source(s) with Federal, State and local agencies having an interest and furnish written approval of these agencies for use of such source(s).

(1) Field Supervisor, U.S. Fish and Wildlife Service, Ecological Services, 2651 Coolidge Road, East Lansing, Michigan 48823. Phone: 517-351-2555.

(2) Chief, Office of Strategic Environmental Analysis, B 19J,, U.S. Environmental Protection Agency, 77 West Jackson Blvd., Chicago, Illinois 60604-3590.

(3) Chief, Land and Water Mgmt. Division, Michigan Department of Environmental Quality, P. O. Box 30458, Lansing, Michigan 48909.

(4) State Historic Preservation Officer, Michigan Bureau of History, 717 W. Allegan, Lansing, Michigan 48918-1800.

j. The proposed reduction, if any, in the applicable unit or lump-sum prices the BIDDING SCHEDULE if the request were to be approved by the Government.

Survey Note Format; G-AOF.

Submit the proposed survey note format prior to performing any survey work at the work site.

Video Cassettes; G-AOF.

Prior to the start of work, video recordings shall be delivered within seven (7) calendar days after taping of all haul roads and access to project site.

SD-07 Certificates

As-Built Technician's Qualifications

Submit the identity and qualifications of the persons assigned to prepare the as-built information at least 10 calendar days in advance of preparing the drawings.

As-built Drawings; G-AOF.

Within ten (10) calendar days after the substantial completion date as established by the Contracting Officer, submit the as-built details of the work performed under this contract on a set of blue-line prints of the contract drawings marked in red. Following review and approval by the Government, the Contractor shall prepare electronic and mylar copies of as-built drawings for submittal within 15 calendar days following receipt of comments from the Government. Electronic files shall be submitted in Microstation 95 (.dgn) CADD file format, suitable for plotting with Intergraph IPLOT Software. The electronic medium for file transfers shall be agreed to prior to the time of submittal and shall be compatible with current industry standards and hardware configurations.

Survey Information

Upon completion of the contract work, the originals of all field notes, sketches, recordings and computations made by the Contractor in performing the layout work shall be submitted in ring binders.

1.3 REGULATORY REQUIREMENTS

1.3.1 Additional Work Proposed and Not Authorized

1.3.1.1 Work Subject to 33 CFR 320-330

Any additional work (not specifically shown on the plans or delineated in the specifications) proposed by the Contractor in or affecting navigable waters, including wetlands (as defined in 33 CFR 320-330, published in the Federal Register Vol.51, No. 219, Thursday, November 13, 1986) shall not be performed without a Department of the Army Permit. This requirement shall be applicable to all work, permanent or temporary, and/or fill(s). The Department of the Army Permit shall be approved by the District Engineer or Deputy District Engineer in accordance with the laws of the United States and the regulations promulgated thereunder, including, but not limited to, the River and Harbor Act of 1899, the Clean Water Act and the National Environmental Policy Act of 1969, as amended. Corps employees (Contracting Officer's Representatives (COR) or inspectors) are not delegated authority to authorize such work. Information on making application for such permit(s) may be obtained by contacting one of the offices as listed hereinafter. When applying for information or a permit, a copy of any correspondence should be directed to the Contracting Officer of this contract. If a permit is not obtained, the additional work cannot be accomplished. Any delay in processing the permit will not constitute the basis of a claim under this contract. The fact that the Contractor is performing work under a Department of the Army Contract will give the Contractor no greater rights than any other applicant for a Department of the Army Permit.

MICHIGAN-INDIANA

Regulatory Branch
Engineering and Technical Services Division

U.S. Army Engineer District, Detroit
P. O. Box 1027
Detroit, MI 48231
Telephone: 313-226-6813

1.4 PROJECT/SITE CONDITIONS

1.4.1 Condition and Use of Project Site

The drawings indicate soundings and elevations at the project site as found in condition surveys made as stated on the contract drawings. A notification of at least five (5) calendar days shall be given to the Contracting Officer prior to bringing any construction equipment or material upon the work site. The Contractor shall be responsible for damages that may be suffered due to its operations. The Contractor shall note CLAUSE titled "PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS."

1.4.1.1 Physical Conditions

The physical conditions shown on the drawings are indicative of those that prevailed at the time of the site investigations and may be different than those at the time of construction. Significant variations that would require changes to the plans or specification shall be reported to the Contracting Officer immediately. The information shown on the logs of soil borings on the contract drawings is from borings located within or near the work areas. While the borings are representative of subsurface conditions at their respective locations and for their respective vertical reaches, localized variations of characteristics of the subsurface materials of this region are anticipated. Field logs of borings taken in the project area, soil samples, and other subsurface information obtained or prepared for this contract are available for examination upon request at the Engineering & Construction Division, Design Branch, U.S. Army Corps of Engineers, Detroit District, 477 Michigan Avenue, Detroit, MI 48226.

1.4.1.2 Work and Storage Areas

Work and storage areas will be provided at the site and will be as designated and/or approved by the Contracting Officer. Areas made available to the Contractor will be selected to minimize interference with Government operations and other contractors.

1.4.2 Existing Vegetation, Structures, Equipment, Utilities & Improvements

General locations of applicable existing utilities, vegetation, structures, equipment and improvements, based upon latest information available to the Government have been shown on the drawings. However, it is the Contractor's obligation to establish the exact horizontal and vertical location and size of all existing utility lines which are located within the required work area. The Contractor shall submit a utility locating planfor locating existing utilities and a copy of its utility location findings prior to commencing work on the site. Any utility lines which are not found by the Contractor, but which are known to exist at the project site, shall be reported to the Contracting Officer immediately. The Contracting Officer will have the option of directing commencement of work at the site or requiring the Contractor to submit further plans for locating the utility lines. Once the utilities have been located and marked, the Contractor shall be deemed to have the location made known to it pursuant to CLAUSE titled "PROTECTION OF EXISTING VEGETATION,

STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS." If the Contractor damages any existing utility line, vegetation, structure, equipment or improvement, a report thereof shall be made immediately to the Contracting Officer. In any event, existing utility lines, vegetation, structures, equipment or improvements shall be protected from damage, and if damaged, shall be repaired by the Contractor at its own expense.

1.4.3 Vehicular Access

Throughout the period of work on this contract, the Contractor shall maintain an all-weather roadway through or around its work area when work therein would otherwise block an existing roadway. Such permanent or temporary roadways shall be kept open for use by emergency vehicles, as well as residential and commercial traffic at all times.

1.4.4 Utility Services

1.4.4.1 Contractor-Furnished Utility Services

The Contractor shall furnish, all water, electric current and other utilities required for its use.

1.4.5 Protection and Maintenance of Traffic

1.4.5.1 Haul Roads

The Contractor may, at its own expense, construct access and haul roads necessary for proper prosecution of the work under this contract. Haul roads shall be constructed with suitable grades and widths; sharp curves, blind corners, and dangerous cross traffic shall be avoided. The Contractor shall provide necessary lighting, signs, barricades, and distinctive markings for safe movement of traffic. The method of dust control shall be adequate to ensure safe operation at all times. Location, grade, width, and alignment of construction and hauling roads shall be subject to approval by the Contracting Officer. Lighting shall be adequate to assure full and clear visibility for full width of haul road and work areas during any night work operations. Upon completion of the work, haul roads shall be removed unless otherwise approved by the Contracting Officer. Any dirt or mud which is tracked onto paved or surfaced roadways shall be promptly cleaned away.

1.4.5.2 Barricades

The Contractor shall erect and maintain temporary barricades to limit public access to hazardous areas. Such barricades shall be required whenever safe and public access to paved areas such as roads, parking areas or sidewalks is prevented by construction activities or as otherwise necessary to ensure the safety of both pedestrian and vehicular traffic. Barricades shall be securely placed, clearly visible with adequate illumination to provide sufficient visual warning of the hazard during both day and night.

1.4.6 Contract Supervision and Representation

The Contractor's local representative shall be available to Government representatives during duty hours, 8 a.m. to 4:30 p.m., on normal working days and shall be available by telephone at other times. The name of the Contractor's representative and the contact telephone number shall be furnished to the Government.

1.4.7 Quantity Surveys

The CLAUSE titled "QUANTITY SURVEYS" is applicable other than for measurement of quantities of work performed for stone construction utilizing new stone. Measurement and payment for stone construction is as specified in SECTION 01025, "MEASUREMENT AND PAYMENT" and SECTION 02486, "STONE CONSTRUCTION".

1.4.8 Layout of Work and Surveys

1.4.8.1 Layout of Work

The following requirements are in addition to the requirements of CLAUSE titled "LAYOUT OF WORK." The Government has established bench marks and horizontal control points at the site of the work. Horizontal control points and descriptions of bench marks are shown on the drawings and on sheets enclosed in SECTION 01999. The elevations of bench marks are referred to mean water level (IGLD 1955).

1.4.8.2 Surveyor Requirements

From these control points and bench marks, the Contractor shall lay out the work by establishing all lines, grades, range markers and gauges at the site as necessary to control the work. All survey information shall be recorded in accordance with standard and approved methods and in the survey note format approved by the Contracting Officer. All field notes, sketches, recordings and computations made by the Contractor in performing the layout work shall be available at all times during the progress of the work for ready examination by the Contracting Officer or his or her duly authorized representative and upon completion of the contract work the originals shall be turned over to the Contracting Officer in ring binders.

1.4.8.3 Suspension

The Contracting Officer may require that work be suspended at any time when location and limit marks established by the Contractor are not reasonably adequate to permit checking the work. Such suspension will be withdrawn upon satisfactory replacement of location and limit marks. Such suspension shall be at no additional cost to the Government and shall not entitle the Contractor to an extension of time for completing the work.

1.4.8.4 Verification

The Government may make checks as the work progresses to verify lines and grades established by the Contractor and to determine the conformance of the completed work as it progresses with the requirements of contract specifications and drawings. Such checking by the Contracting Officer or his or her representative shall not relieve the Contractor of its responsibility to perform all work in accordance with the contract drawings and specifications and the lines and grades given therein.

1.5 SEQUENCING AND SCHEDULING

1.5.1 Sunday, Holiday' Night and Extended Hours of Operations

When the Contractor elects to work more than 8 hours per day, Monday through Friday or on Saturdays, Sundays, holidays or nights when not prohibited herein, notice of its intention to do so shall be given to the

Contracting Officer not less than forty-eight (48) hours in advance thereof. Adequate lighting for thorough inspection of night operations shall be provided by the Contractor at its expense.

1.5.2 Work Period Restrictions

No work is allowed at the project sites during the following periods:

c. Holiday periods as follows:

(1) 6 p.m. 29 August to 8 a.m. 2 September 2003

(2) 6 p.m. 26 November to 8 a.m. 1 December 2003

The above-stated no-work periods, as applicable, are included in the number of calendar days within which the Contractor is required to complete the work as established in CLAUSE titled "COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK" and therefore the above-stated no-work periods will not entitle the Contractor to additional time for completing the work.

1.5.3 Start Work

Evidence that the Contractor has started procurement of materials, preparation and submission of shop drawings, preparation of subcontracts, and other preparatory work will satisfy the requirement that work commence within ten (10) calendar days after receipt of Notice to Proceed. (See Clause titled COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK, FAR 52.212-0003.)

1.6 REPORT REQUIREMENTS

1.6.1 Accident Prevention Plan

Contractor shall provide an accident prevention plan including an activity hazard analysis to the Contracting Officer within 15 calendar days after receipt of award. Plan shall be in accordance with Contract Clause entitled "ACCIDENT PREVENTION (NOV 1991) - ALTERNATE 1.

1.6.2 Payrolls and Basic Records

Contractor shall submit payrolls and basic records in accordance with the CLAUSE entitled "PAYROLLS AND BASIC RECORDS (FEB 1988)".

1.6.3 Progress Chart

Contractor shall submit progress chart in accordance with the Contract clause entitled "SCHEDULE FOR CONSTRUCTION CONTRACTS (APR 1984)".

PART 2 PRODUCTS

2.1 MATERIALS

2.1.1 Use of Materials from Non-Listed, Non-Commercially Active Sources

If after award of the contract, the Contractor proposes to use stone from a source or sources other than approved commercially active sources or the sources listed in SECTION 02486, "STONE CONSTRUCTION", Paragraph, "STONE MATERIALS", Subparagraph, "Sources" or to use soil, granular or aggregate

materials for fill from a non-commercially active source or sources, the Contractor shall submit data as required in the Paragraph entitled "SUBMITTALS". The data shall be accompanied by a request for approval. Non-listed, non-commercially active stone or material sources shall not be used unless the proposal and use of the source(s) are approved by the Contracting Officer in accordance with applicable provisions of the contract. All expenses incurred by the Government and the Contractor in connection with the Contractor's request for approval for the use of materials from non-listed, non-commercially active sources shall be borne by the Contractor and all use of such materials and all operations in connection therewith shall be at the Contractor's risk. No extension of the time for completion of the work will be granted as the result of disapproval or approval of the Contractor's request to use a non-listed, non-commercially active source or sources. If not approved, the Contractor shall use materials from the applicable listed or commercially active source(s).

2.2 AS-BUILT DRAWINGS

The as-built drawing details shall be accurate and of professional quality prepared those with adequate as-built technician's qualifications.

PART 3 EXECUTION (NOT APPLICABLE)

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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01101

REAL ESTATE

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SECTION 01101

REAL ESTATE

PART 1 GENERAL

1.1 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only or as otherwise designated. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Additional Property Agreements; G-RED.

Copies of any agreements for Contractor-acquired real estate rights for this project shall be furnished before entering thereon.

1.2 REGULATORY REQUIREMENTS

1.2.1 Real Estate Rights

Rights for the use of the Government-furnished work and storage areas have been obtained and the general limits of the areas are shown on the drawings. Copies of instruments conveying rights for use of the work and storage areas shown on the drawings and specified herein are available for inspection in the Engineering & Construction Division, Design Branch, U.S. Army Corps of Engineers, Detroit District, 477 Michigan Avenue, McNamara Building, Detroit, Michigan. Conformance to all applicable requirements of the instruments conveying rights is required. Two (2) copies of each instrument will be furnished to the Contractor. All real estate lakeward of the Ordinary High Water Mark is under Federal jurisdiction and no real estate permit or agreements are necessary for work therein.

1.2.2 Additional Real Estate Rights

Any additional property agreements and/or real estate rights desired by the Contractor shall be obtained by the Contractor at its own expense. Such agreements shall clearly relieve the Government of any responsibility for damages or liability resulting from the Contractor's use of such grounds.

1.3 PROJECT/SITE CONDITIONS

1.3.1 Location and Verification

It shall be the Contractor's responsibility to accurately locate the limits of all lands utilized under the contract. The corner and angle points of each area for which rights have been obtained shall be marked with semipermanent markers except where there is an approved existing property marker. Temporary markers shall be placed at points on alignment. The points on alignment shall be marked at stations so that intervals between points do not exceed 200 feet.

1.3.2 Survey Markers

All markers shall be installed in an area prior to its use and they shall be available for reference during and upon completion of use of the area. Where approved existing property markers are found, a witness stake, as specified in Subparagraph, "Semipermanent Markers" below, shall be provided. If the types of markers specified hereinafter cannot be used, other types, as approved by the Contracting Officer, shall be provided.

1.3.2.1 Semipermanent Markers

The markers shall be a steel rod one-half inch in diameter and four (4) feet long. The steel rod shall be driven vertically into the ground so that the top is flush with the finished ground surface. Each marker shall be witnessed by a 2" x 2" yellow stake extending two (2) feet above the ground surface and driven into the ground until stable, with not less than one (1) foot penetration.

1.3.2.2 Temporary Markers

Markers shall be 2" x 2", red-colored, wood hub stakes driven into the ground until stable (not less than one (1) foot penetration) with two (2) feet projecting above the ground surface. If the period in which temporary markers are to be in place exceeds one (1) construction season, a more permanent type of marker, as approved, shall be provided.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01130

ENVIRONMENTAL PROTECTION

-- End of Section Table of Contents --

SECTION 01130

ENVIRONMENTAL PROTECTION

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

CODE OF FEDERAL REGULATIONS (CFR)

40 CFR 261	Identification and listing of Hazardous Waste

ENGINEERING MANUALS (EM)

EM 385-1-1	(3 Sept. 1996) U.S. Army Corps of Engineers Safety and Health Requirements Manual

MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT)

MDOT 1996	(1996) Standard Specifications for Construction

1.2 DEFINITIONS

Environmental pollution and damage is defined as the presence of chemical, physical, or biological elements or agents that adversely affect human health or welfare; unfavorably alter ecological balances of plant or animal communities; or degrade the environment from an aesthetic, cultural or historic perspective. Environmental protection is the prevention/control of pollution and habitat disruption that may occur during construction. The control of environmental pollution and damage requires consideration of air, water, land, biological and cultural resources (archaeological and historic resources); and includes management of visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy and radioactive materials; and other pollutants.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only or as otherwise designated. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Environmental Protection Plan; G-AOF.

Submit in writing an Environmental Protection Plan within ten (10) calendar days after receipt of Notice to Proceed. See Article titled ENVIRONMENTAL

PROTECTION PLAN for details.

1.4 ENVIRONMENTAL PROTECTION REQUIREMENTS

The Contractor shall be knowledgeable of and comply with all applicable Federal, State, and local laws, regulations, permits and licenses concerning environmental protection, pollution control and abatement that are applicable to the Contractor's proposed operations. Note any unique requirements for this contract in the environmental pollution control plan. Also see Clauses titled "CLEAN AIR AND WATER" and "PERMITS AND RESPONSIBILITIES." The Contractor shall provide environmental protective measures and procedures to prevent and control pollution, limit habitat disruption, and correct environmental damage that occurs during construction.

1.4.1 Protection of Features

This section supplements the Contract Clause PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS. The Contractor shall prepare a list of features requiring protection under the provisions of the contract clause which are not specially identified on the drawings as environmental features requiring protection. The Contractor shall confine its activities to areas defined by the drawings and specifications. The Contractor shall protect those environmental features, indicated specially on the drawings or in the specifications, in spite of interference which their preservation may cause to the Contractor's work under the contract.

1.4.2 Permits

The Contractor shall obtain any necessary permits and licenses that have not been obtained by the Government. This section supplements the Contractor's responsibility under the contract clause PERMITS AND RESPONSIBILITIES to the extent that the Government has already obtained environmental permits.

1.4.3 Environmental Assessment of Contract Deviations

The Contract specifications have been prepared to comply with the special conditions and mitigation measures of an environmental nature which were established during the planning and development of this project. The Contractor is advised that deviations from the drawings or specifications (e.g., proposed alternate borrow areas, disposal areas, staging areas, alternate access routes, etc.) could result in the requirement for the Government to reanalyze the project from an environmental standpoint. Deviations from the construction methods and procedures indicated by the plans and specifications which may have an environmental impact will require a extended review, processing, and approval time by the Government. The Contracting Officer reserves the right to disapprove alternate methods, even if they are more cost effective, if the Contracting Officer determines that the proposed alternate method will have an adverse environmental impact.

1.5 ENVIRONMENTAL PROTECTION PLAN

The Contractor shall submit an Environmental Protection Plan for review and acceptance by the Contracting Officer. The Government will consider an interim plan for the first 30 days of operations. However, the Contractor shall furnish an acceptable final plan not later than 30 calendar days

after receipt of the Notice to Proceed. Acceptance is conditional and is predicated upon satisfactory performance during construction. The Government reserves the right to require the Contractor to make changes in the Environmental Protection Plan or operations if the Contracting Officer determines that environmental protection requirements are not being met. The plan shall detail the actions which the Contractor shall take to comply with all applicable Federal, State, and local laws and regulations concerning environmental protection and pollution control and abatement, as well as the additional specific requirements of this contract. The Contractor shall refer to the applicable existing environmental documentation to ensure that the natural, historic, and cultural resources specific or unique to this project are protected. Any necessary coordination with and/or notices to all interested agencies and the public have been made by the Government for environmental documentation prepared by the Government. Copies of the documents are available for review at the offices of the Detroit District, Engineering & Construction Division, Environmental Analysis Branch, 7th Floor, 477 Michigan Avenue, Detroit, MI 48226. No physical work at the site shall begin prior to acceptance of the Contractor's plan or an interim plan covering the work to be performed. The environmental protection plan shall include, but not be limited to, the following:

1.5.1 Federal, State and Local Laws and Regulations

The Contractor shall be knowledgeable of all Federal, State and local environmental laws and regulations which apply to the construction operations under the Contract and shall list any unique requirements applicable to this contract as part of the Environmental Protection Plan.

1.5.2 Spill Control Plan

The Contractor shall include as part of the Environmental Protection Plan, a Spill Control Plan. The plan shall include the procedures, instructions, and reports to be used in the event of an unforeseen spill of a substance regulated by the Emergency Response and Community Right-to-Know Act or regulated under State or local laws or regulations. The Spill Control Plan supplements the requirements of EM 385-1-1. This plan shall include as a minimum:

a. The name of the individual who will be responsible for implementing and supervising the containment and cleanup.

b. Training requirements for Contractor's personnel and methods of accomplishing the training.

c. A list of materials and equipment to be immediately available at the job site, tailored to cleanup work of the potential hazard(s) identified.

d. The names and locations of suppliers of containment materials and locations of additional fuel oil recovery, cleanup, restoration, and material-placement equipment available in case of an unforeseen spill emergency.

e. The methods and procedures to be used for expeditious contaminant cleanup.

f. The name of the individual who will report any spills or hazardous substance releases and who will follow up with complete documentation.

This individual shall immediately notify the Contracting Officer in addition to the legally required Federal, State, and local reporting channels (including the National Response Center 1-800-424-8802) if a reportable quantity spill occurs. The plan shall contain a list of the required reporting channels and telephone numbers.

1.5.3 Recycling and Waste Minimization Plan

The Contractor shall submit a Recycling and Waste Minimization Plan as a part of the Environmental Protection Plan. The plan shall detail the Contractor's actions to comply with the following recycling and waste minimization requirements:

a. The Contractor shall participate in State and local government sponsored recycling programs to reduce the volume of solid waste materials at the source.

1.5.4 Contaminant Prevention Plan

As a part of the Environmental Protection Plan, the Contractor shall prepare a contaminant prevention statement identifying potentially hazardous substances to be used on the job site and intended actions to prevent accidental or intentional introduction of such materials into the air, water, or ground. The Contractor shall detail provisions to be taken to meet Federal, State, and local laws and regulations regarding the storage and handling of these materials.

1.5.5 Environmental Monitoring

The Contractor shall include in the plan the details of environmental monitoring requirements under the laws and regulations and a description of how this monitoring will be accomplished, including, but not limited to, monitoring of land, air, and water resources, including noise, odors and vibrations.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 SPECIAL ENVIRONMENTAL PROTECTION REQUIREMENTS

3.1.1 Work Area Limits

Prior to any construction, the Contractor shall mark the areas where the work is to be performed under this contract. Isolated areas within the general work area which are to be saved and protected shall also be marked or fenced. Monuments and markers shall be protected before construction operations commence. Where construction operations are to be conducted during darkness, the markers shall be visible during darkness. The Contractor shall convey to its personnel the purpose of marking and/or protection of all necessary objects.

3.1.2 Protection of Landscape

Trees, shrubs, vines, grasses, land forms and other landscape features to be preserved, indicated and defined on the drawings submitted by the Contractor as a part of the Environmental Protection Plan shall be clearly identified by marking, fencing, or wrapping with boards, or any other approved techniques. Vegetated soil surfaces disturbed by construction

activities shall be re-vegetated as soon as practicable after completing operations in the disturbed area.

3.1.2.1 Tree Protection

No ropes, cables, or guys shall be fastened to or attached to any tree(s) for anchorage unless specifically authorized by the Contracting Officer. Where such special use is permitted, the Contractor shall provide effective protection to prevent damage to the tree and other land and vegetative resources. Unless specifically authorized by the Contracting Officer, no construction equipment or materials shall be placed or used within the drip line of trees shown on the drawings to be saved. No excavation or fill shall be permitted within the drip line of trees to be saved except as shown on the drawings.

3.1.3 U.S. Department of Agriculture (USDA) Quarantined Considerations

The Contractor shall thoroughly clean all construction equipment at the prior job site in a manner that ensures all residual soil is removed and that egg deposits from plant pests are not present to prevent the spread of non-indigenous and/or pest species. The Contractor shall consult with the USDA Plant Protection and Quarantine (USDA - PPQ) jurisdictional office for additional cleaning requirements that may be necessary.

3.1.3.1 Control of Non-Indigenous Aquatic Nuisance Species

The Contractor shall conduct diligent watercraft operating practices to prevent the spread of Non-Indigent Aquatic Nuisance Species (ANS). Such practices shall include, but not be limited to, cleaning equipment on-site to prevent the spread of seeds, eggs, larvae, or other dispersal vectors (e.g. do not transport soil and plant matter from one location to another); and discharging or exchanging ballast water or other water from a vessel of any type only at a location where the chances for survival of ANS are minimal, such as at cold, deep regions of Lake Superior which are far from shore.

3.1.4 Disposal of Waste Materials

Disposal of any materials, waste, effluents, trash, garbage, oil, grease, chemicals, etc., in areas adjacent to streams, rivers, or lakes and in areas not authorized for waste disposal shall not be permitted. If any waste material is dumped or placed in unauthorized areas, the Contractor shall remove the material and restore the area to the condition of the adjacent undisturbed area. If necessary, ground which has become contaminated through the fault or negligence of the Contractor shall be excavated, disposed of as directed by the Contracting Officer, and replaced with suitable fill material compacted and finished with topsoil and planted as required to re-establish vegetation, all at the expense of the Contractor. Disposal of waste, trash and other materials off the project site shall be in accordance with all applicable Federal, State, and local laws, rules and regulations. Removed vegetation, including trees, shall be put to beneficial reuse and not placed into landfills.

3.1.4.1 Disposal of Solid Wastes

Solid waste is rubbish, debris, waste materials, garbage, and other discarded solid materials (excluding clearing debris and hazardous waste as defined in following paragraphs). Solid waste shall be placed in containers and disposed of on a regular schedule. All handling and

disposal shall be conducted in such a way as to prevent spillage and contamination. The Contractor shall transport all solid waste off Government property and dispose in compliance with Federal, State, and local requirements. The Contractor shall comply with Federal, State, and local laws and regulations pertaining to the use of the landfill area.

3.1.4.2 Disposal of Chemical Waste

Chemical waste shall be stored in corrosion resistant containers, removed from the work area and disposed of in accordance with Federal, State, and local laws, rules and regulations.

3.1.4.3 Spillages

Special measures shall be taken to prevent chemicals, fuels, oils, greases, bituminous materials, ashes, sawdust, waste washings, herbicides and insecticides, rubbish or sewage, and other pollutants from entering public waters.

3.1.5 Clearing Debris

Clearing debris is trees, tree stumps, tree trimmings, and shrubs, and leaves, vegetative matter, excavated natural materials (e.g., dirt, sand, and rock), and demolition products (e.g., brick, concrete, glass, and metals).

a. The Contractor shall collect trees, tree stumps, tree trimmings, shrubs, leaves, and other vegetative matter; and shall transport from Government property for proper disposal in compliance with Federal, State, and local requirements. The Contractor shall segregate the matter where appropriate for proper disposal. Untreated and unpainted scrap lumber may be disposed of with this debris where appropriate.

b. Demolition products shall be transported from Government property for proper disposal in compliance with Federal, State, and local requirements.

3.1.6 Disposal of Contractor Generated Hazardous Wastes

Hazardous wastes are hazardous substances as defined in 40 CFR 261, or as defined by applicable State and local regulations. Hazardous waste generated by construction activities shall be removed from the work area and be disposed in compliance with Federal, State, and local requirements. The Contractor shall segregate hazardous waste from other materials and wastes, and shall protect it from the weather by placing it in a safe covered location; precautionary measures against accidental spillage such as berming or other appropriate measures shall be taken. Hazardous waste shall be removed from Government property within 60 days. Hazardous waste shall not be dumped onto the ground, into storm sewers or open water courses, or into the sanitary sewer system. A copy of the manifest shall be provided to the Contracting Officer for any hazardous waste disposed of under this contract.

3.1.7 Fuels and Lubricants

Fueling and lubrication of equipment and motor vehicles shall be conducted in a manner that affords the maximum protection against spills and evaporation. Lubricants and waste oil to be discarded shall be stored in marked corrosion-resistant containers and recycled or disposed in

accordance with Federal, State, and local laws and regulations.

3.1.8 Hydrocarbons, Carbon Monoxide, and Oxides of Nitrogen and Sulfur

Vapor/gaseous emissions of hydrocarbons, carbon monoxide, oxides of nitrogen and sulfur oxides from equipment shall be controlled to Federal and State limits at all times.

3.1.9 Odors

Odors from all construction activities, processing and preparation of shall be controlled at all times.

3.1.10 Ground Vibrations

Ground vibrations from construction activities shall be controlled at all times.

3.1.11 Protection from Sound Intrusions

The Contractor shall keep construction activities under surveillance and control to minimize damage to the environment by noise. Construction equipment shall be fitted with noise control devices.

3.2 HISTORICAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

3.2.1 Discovered Historic, Archaeological, and Cultural Resources

If, during construction activities, items are observed that may have historic or archaeological value (e.g., human remains or associated objects, or artifacts are discovered), such items shall be protected in place and the observations shall be reported immediately to the Contracting Officer so that the District Archaeologist may be notified and a determination made as to their significance and what, if any, special disposition of the finds should be made. The Contractor shall cease all activities that may result in impact to, or the destruction of, these resources. The Contractor shall prevent its employees from trespassing on, removing, or otherwise disturbing such resources.

3.3 PROTECTION OF WATER RESOURCES

The Contractor shall keep construction activities under surveillance, management, and control to avoid pollution of surface and ground waters.

3.4 PROTECTION OF FISH AND WILDLIFE RESOURCES

3.4.1 Protection of Fish, Wildlife and Flora

The Contractor shall keep construction activities under surveillance, management and control to minimize interference with, disturbance to and damage of fish, wildlife and flora. Species that require specific attention along with measures for their protection shall be listed by the Contractor prior to beginning construction operations. See Subparagraph titled "Environmental Protection Plan."

3.5 PROTECTION OF AIR RESOURCES

Special management techniques as set out below shall be implemented to control air pollution by the construction activities. These techniques

supplement the requirements of Federal, State, and local laws and regulations; and the safety requirements under this Contract. If any of the following techniques conflict with the requirements of Federal, State, or local laws or regulations, or safety requirements under this contract, then those requirements shall be followed in lieu of the following.

3.5.1 Particulates

Airborne particulates, including dust particles, aerosols, and gaseous by-products from construction activities and processing and preparation of materials, shall be controlled at all times, including weekends, holidays, and hours when work is not in progress. The Contractor shall maintain all excavations, stockpiles, haul roads, permanent and temporary access roads, plant sites, disposal sites, borrow areas, and all other work areas free from airborne dust which would cause a hazard or nuisance.

3.6 INSPECTION

If the Contracting Officer notifies the Contractor in writing of any observed noncompliance with contract requirements or Federal, State, or local laws, regulations, or permits, the Contractor shall inform the Contracting Officer of proposed corrective action and take such action to correct the noncompliance. If the Contractor fails to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action is taken. No time extensions will be granted or costs or damages allowed to the Contractor for any such suspension.

3.7 MAINTENANCE OF POLLUTION CONTROL FACILITIES

The Contractor shall maintain all constructed pollution control facilities and portable pollution control devices for the duration of the Contract or for the length of time construction activities create the particular pollutant.

3.8 TRAINING OF CONTRACTOR PERSONNEL

Contractor personnel shall be trained in environmental protection and pollution control. The Contractor shall conduct environmental protection/pollution control meetings for all Contractor personnel monthly. The training and meeting agenda shall include methods of detecting and avoiding pollution, familiarization with pollution standards, both statutory and contractual, installation and care of facilities (vegetative covers, etc.), and instruments required for monitoring purposes to ensure adequate and continuous environmental protection/pollution control. Anticipated hazardous or toxic chemicals or wastes, and other regulated contaminants, shall also be discussed. Other items required to be discussed shall include recognition and protection of archaeological sites, artifacts, and historic structures.

3.9 POST CONSTRUCTION CLEANUP OR OBLITERATION

The Contractor shall obliterate all signs of temporary facilities such as haul roads, work area, structures, stock piles of excess or waste materials, fencing, buoys, stakes, or other vestiges of construction within the work, storage and access areas or as directed by the Contracting Officer. Except for surfaced areas, the areas shall be restored to near natural conditions which will permit the growth of vegetation thereon. In areas where restoration to near natural conditions is not required,

surfaces shall be evenly and smoothly dressed, sloped to drain, and the edges of the restored area graded to be flush with the surrounding existing grade even if original contours are not restored. All damaged non-surfaced areas shall be restored by topsoiling, fertilizing, seeding and mulching, unless otherwise specified or directed. The topsoiling, fertilizing, seeding, and mulching shall be in accordance with the applicable provisions of MDOT 1996, DIVISION 8, Section 816 "Turf Establishment"." Dune grass planting shall be in accordance with MDOT 1996, Section 818, Dune Grass Planting.

3.10 RESTORATION OF LANDSCAPE

The Contractor shall restore all landscape features damaged of destroyed during construction operations outside the limits of the approve work areas. Such restoration shall be in accordance with the Contractor's submitted plan, as approved by the Contracting Officer. The work shall be accomplished at the Contractor's expense.

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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01312A

QUALITY CONTROL SYSTEM (QCS)

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SECTION 01312A

QUALITY CONTROL SYSTEM (QCS)

1.1 GENERAL

The Government will use the Resident Management System for Windows (RMS) to assist in its monitoring and administration of this contract. The Contractor shall use the Government-furnished Construction Contractor Module of RMS, referred to as QCS, to record, maintain, and submit various information throughout the contract period. This joint Government-Contractor use of RMS and QCS will facilitate electronic exchange of information and overall management of the contract. QCS provides the means for the Contractor to input, track, and electronically share information with the Government in the following areas:

Administration
Finances
Quality Control
Submittal Monitoring
Scheduling
Import/Export of Data

1.1.1 Correspondence and Electronic Communications

For ease and speed of communications, both Government and Contractor will, to the maximum extent feasible, exchange correspondence and other documents in electronic format. Correspondence, pay requests and other documents comprising the official contract record shall also be provided in paper format, with signatures and dates where necessary. Paper documents will govern, in the event of discrepancy with the electronic version.

1.1.2 Other Factors

Particular attention is directed to Contract Clause, "Schedules for Construction Contracts", Contract Clause, "Payments", Section 01320A, PROJECT SCHEDULE, Section 01330, SUBMITTAL PROCEDURES, and Section 01451A, CONTRACTOR QUALITY CONTROL, which have a direct relationship to the reporting to be accomplished through QCS. Also, there is no separate payment for establishing and maintaining the QCS database; all costs associated therewith shall be included in the contract pricing for the work.

1.2 QCS SOFTWARE

QCS is a Windows-based program that can be run on a stand-alone personal computer or on a network. The Government will make available the QCS software to the Contractor after award of the construction contract. Prior to the Pre-Construction Conference, the Contractor shall be responsible to download, install and use the latest version of the QCS software from the Government's RMS Internet Website. Upon specific justification and request by the Contractor, the Government can provide QCS on 3-1/2 inch high-density diskettes or CD-ROM. Any program updates of QCS will be made available to the Contractor via the Government RMS Website as they become available.

1.3 SYSTEM REQUIREMENTS

The following listed hardware and software is the minimum system configuration that the Contractor shall have to run QCS:

Hardware

IBM-compatible PC with 500 MHz Pentium or higher processor

128+ MB RAM for work station/ 256+MB RAM for server.

4 GB hard drive disk space for sole use by the QCS system

3 1/2 inch high-density floppy drive

Compact disk (CD) Reader 8X speed or higher

SVGA or higher resolution monitor (1024X768, 256 colors)

Mouse or other pointing device.

Windows compatible printer. (Laser printer must have 4 MB+ of RAM)

Connection to the Internet, minimum 256k BPS

Software

MS Windows 98, ME, NT, or 2000

Word Processing software compatible with MS Word 97 or newer

Latest version of; Navigator, Microsoft Internet Explorer, or other browser that supports HTML 4.0 or higher

The Contractor's computer system shall be protected by virus protection software that is regularly upgraded with all issued manufacturer's updates throughout the life of the contract.

Electronic mail (E-mail) MAPI compatible.

1.4 RELATED INFORMATION

1.4.1 QCS User Guide

After contract award, the Contractor shall download instructions for the installation and use of QCS from the Government RMS Internet Website; the Contractor can obtain the current address from the Government. In case of justifiable difficulties, the Government will provide the Contractor with a CD-ROM containing these instructions.

1.4.2 Contractor Quality Control(CQC) Training

The use of QCS will be discussed with the Contractor's QC System Manager during the mandatory CQC Training class.

1.5 CONTRACT DATABASE

Prior to the pre-construction conference, the Government shall provide the Contractor with basic contract award data to use for QCS. The Government will provide data updates to the Contractor as needed, generally by files attached to E-mail. These updates will generally consist of submittal reviews, correspondence status, QA comments, and other administrative and QA data.

1.6 DATABASE MAINTENANCE

The Contractor shall establish, maintain, and update data for the contract in the QCS database throughout the duration of the contract. The Contractor shall establish and maintain the QCS database at the Contractor's site office. Data updates to the Government shall be submitted by E-mail with file attachments, e.g., daily reports, schedule updates, payment requests. If permitted by the Contracting Officer, a data diskette or CD-ROM may be used instead of E-mail (see Paragraph DATA SUBMISSION VIA COMPUTER DISKETTE OR CD-ROM). The QCS database typically shall include current data on the following items:

1.6.1 Administration

1.6.1.1 Contractor Information

The database shall contain the Contractor's name, address, telephone numbers, management staff, and other required items. Within 14 calendar days of receipt of QCS software from the Government, the Contractor shall deliver Contractor administrative data in electronic format via E-mail.

1.6.1.2 Subcontractor Information

The database shall contain the name, trade, address, phone numbers, and other required information for all subcontractors. A subcontractor must be listed separately for each trade to be performed. Each subcontractor/trade shall be assigned a unique Responsibility Code, provided in QCS. Within 14 calendar days of receipt of QCS software from the Government, the Contractor shall deliver subcontractor administrative data in electronic format via E-mail.

1.6.1.3 Correspondence

All Contractor correspondence to the Government shall be identified with a serial number. Correspondence initiated by the Contractor's site office shall be prefixed with "S". Letters initiated by the Contractor's home (main) office shall be prefixed with "H". Letters shall be numbered starting from 0001. (e.g., H-0001 or S-0001). The Government's letters to the Contractor will be prefixed with "C".

1.6.1.4 Equipment

The Contractor's QCS database shall contain a current list of equipment planned for use or being used on the jobsite, including the most recent and planned equipment inspection dates.

1.6.1.5 Management Reporting

QCS includes a number of reports that Contractor management can use to track the status of the project. The value of these reports is reflective

of the quality of the data input, and is maintained in the various sections of QCS. Among these reports are: Progress Payment Request worksheet, QA/QC comments, Submittal Register Status, Three-Phase Inspection checklists.

1.6.2 Finances

1.6.2.1 Pay Activity Data

The QCS database shall include a list of pay activities that the Contractor shall develop in conjunction with the construction schedule. The sum of all pay activities shall be equal to the total contract amount, including modifications. Pay activities shall be grouped by Contract Line Item Number (CLIN), and the sum of the activities shall equal the amount of each CLIN. The total of all CLINs equals the Contract Amount.

1.6.2.2 Payment Requests

All progress payment requests shall be prepared using QCS. The Contractor shall complete the payment request worksheet and include it with the payment request. The work completed under the contract, measured as percent or as specific quantities, shall be updated at least monthly. After the update, the Contractor shall generate a payment request report using QCS. The Contractor shall submit the payment requests with supporting data by E-mail with file attachment(s). If permitted by the Contracting Officer, a data diskette may be used instead of E-mail. A signed paper copy of the approved payment request is also required, which shall govern in the event of discrepancy with the electronic version.

1.6.3 Quality Control (QC)

QCS provides a means to track implementation of the 3-phase QC Control System, prepare daily reports, identify and track deficiencies, document progress of work, and support other contractor QC requirements. The Contractor shall maintain this data on a daily basis. Entered data will automatically output to the QCS generated daily report. The Contractor shall provide the Government a Contractor Quality Control (CQC) Plan within the time required in Section 01451A, CONTRACTOR QUALITY CONTROL. Within seven calendar days of Government acceptance, the Contractor shall submit a data diskette or CD-ROM reflecting the information contained in the accepted CQC Plan: schedule, pay activities, features of work, submittal register, QC requirements, and equipment list.

1.6.3.1 Daily Contractor Quality Control (CQC) Reports.

QCS includes the means to produce the Daily CQC Report. The Contractor may use other formats to record basic QC data. However, the Daily CQC Report generated by QCS shall be the Contractor's official report. Data from any supplemental reports by the Contractor shall be summarized and consolidated onto the QCS-generated Daily CQC Report. Daily CQC Reports shall be submitted as required by Section 01451A, CONTRACTOR QUALITY CONTROL. Reports shall be submitted electronically to the Government using E-mail or diskette within 24 hours after the date covered by the report. Use of either mode of submittal shall be coordinated with the Government representative. The Contractor shall also provide the Government a signed, printed copy of the daily CQC report.

1.6.3.2 Deficiency Tracking.

The Contractor shall use QCS to track deficiencies. Deficiencies

identified by the Contractor will be numerically tracked using QC punch list items. The Contractor shall maintain a current log of its QC punch list items in the QCS database. The Government will log the deficiencies it has identified using its QA punch list items. The Government's QA punch list items will be included in its export file to the Contractor. The Contractor shall regularly update the correction status of both QC and QA punch list items.

1.6.3.3 Three-Phase Control Meetings

The Contractor shall maintain scheduled and actual dates and times of preparatory and initial control meetings in QCS.

1.6.3.4 Accident/Safety Tracking.

The Government will issue safety comments, directions, or guidance whenever safety deficiencies are observed. The Government's safety comments will be included in its export file to the Contractor. The Contractor shall regularly update the correction status of the safety comments. In addition, the Contractor shall utilize QCS to advise the Government of any accidents occurring on the jobsite. This brief supplemental entry is not to be considered as a substitute for completion of mandatory reports, e.g., ENG Form 3394 and OSHA Form 200.

1.6.3.5 Features of Work

The Contractor shall include a complete list of the features of work in the QCS database. A feature of work may be associated with multiple pay activities. However, each pay activity (see subparagraph "Pay Activity Data" of paragraph "Finances") will only be linked to a single feature of work.

1.6.3.6 QC Requirements

The Contractor shall develop and maintain a complete list of QC testing, transferred and installed property, and user training requirements in QCS. The Contractor shall update all data on these QC requirements as work progresses, and shall promptly provide this information to the Government via QCS.

1.6.4 Submittal Management

The Government will provide the initial submittal register, ENG Form 4288, SUBMITTAL REGISTER, in electronic format. Thereafter, the Contractor shall maintain a complete list of all submittals, including completion of all data columns. Dates on which submittals are received and returned by the Government will be included in its export file to the Contractor. The Contractor shall use QCS to track and transmit all submittals. ENG Form 4025, submittal transmittal form, and the submittal register update, ENG Form 4288, shall be produced using QCS. RMS will be used to update, store and exchange submittal registers and transmittals, but will not be used for storage of actual submittals.

1.6.5 Schedule

The Contractor shall develop a construction schedule consisting of pay activities, in accordance with Contract Clause "Schedules for Construction Contracts", or Section 01320A, PROJECT SCHEDULE, as applicable. This schedule shall be input and maintained in the QCS database either manually

or by using the Standard Data Exchange Format (SDEF) (see Section 01320A PROJECT SCHEDULE). The updated schedule data shall be included with each pay request submitted by the Contractor.

1.6.6 Import/Export of Data

QCS includes the ability to export Contractor data to the Government and to import submittal register and other Government-provided data, and schedule data using SDEF.

1.7 IMPLEMENTATION

Contractor use of QCS as described in the preceding paragraphs is mandatory. The Contractor shall ensure that sufficient resources are available to maintain its QCS database, and to provide the Government with regular database updates. QCS shall be an integral part of the Contractor's management of quality control.

1.8 DATA SUBMISSION VIA COMPUTER DISKETTE OR CD-ROM

The Government-preferred method for Contractor's submission of updates, payment requests, correspondence and other data is by E-mail with file attachment(s). For locations where this is not feasible, the Contracting Officer may permit use of computer diskettes or CD-ROM for data transfer. Data on the disks or CDs shall be exported using the QCS built-in export function. If used, diskettes and CD-ROMs will be submitted in accordance with the following:

1.8.1 File Medium

The Contractor shall submit required data on 3-1/2 inch double-sided high-density diskettes formatted to hold 1.44 MB of data, capable of running under Microsoft Windows 95 or newer. Alternatively, CD-ROMs may be used. They shall conform to industry standards used in the United States. All data shall be provided in English.

1.8.2 Disk or CD-ROM Labels

The Contractor shall affix a permanent exterior label to each diskette and CD-ROM submitted. The label shall indicate in English, the QCS file name, full contract number, contract name, project location, data date, name and telephone number of person responsible for the data.

1.8.3 File Names

The Government will provide the file names to be used by the Contractor with the QCS software.

1.9 MONTHLY COORDINATION MEETING

The Contractor shall update the QCS database each workday. At least monthly, the Contractor shall generate and submit an export file to the Government with schedule update and progress payment request. As required in Contract Clause "Payments", at least one week prior to submittal, the Contractor shall meet with the Government representative to review the planned progress payment data submission for errors and omissions. The Contractor shall make all required corrections prior to Government acceptance of the export file and progress payment request. Payment requests accompanied by incomplete or incorrect data submittals will be

returned. The Government will not process progress payments until an acceptable QCS export file is received.

1.10 NOTIFICATION OF NONCOMPLIANCE

The Contracting Officer will notify the Contractor of any detected noncompliance with the requirements of this specification. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, shall be deemed sufficient for the purpose of notification.

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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01330

SUBMITTAL PROCEDURES

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SECTION 01330

SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 SUMMARY

1.1.1 Government-Furnished Information

Submittal register will be delivered to the contractor, by contracting officer on 3 1/2 inch disk. Register database will have the following fields completed, to the extent that will be required by the Government during subsequent usage.

Column (c): Lists specification section in which submittal is required.

Column (d): Lists each submittal description (SD No. and type, e.g. SD-04 Drawings) required in each specification section.

Column (e): Lists one principal paragraph in specification section where a material or product is specified. This listing is only to facilitate locating submitted requirements. Do not consider entries in column (e) as limiting project requirements.

Column (f): Indicate approving authority for each submittal. A "G" indicates approval by contracting officer; a blank indicates approval by QC manager.

The database and submittal management program will be extractable from the disk furnished to contractor, for operation on contractor's IBM compatible personal computer with 640kb RAM,a hard drive,and 3 1/2 inch high density floppy disk drive.

1.2 DEFINITIONS

1.2.1 Submittal

Shop drawings, product data, samples, and administrative submittals presented for review and approval. Contract Clauses "FAR 52.236-5, Material and Workmanship," paragraph (b) and "FAR 52.236-21, Specifications and Drawings for Construction," paragraphs (d), (e), and (f) apply to all "submittals."

1.2.2 Types of Submittals

All submittals are classified as indicated in paragraph "Submittal Descriptions (SD)". Submittals also are grouped as follows:

a. Shop drawings: As used in this section, drawings, schedules, diagrams, and other data prepared specifically for this contract, by contractor or through contractor by way of subcontractor, manufacturer, supplier, distributor, or other lower tier

contractor, to illustrate portion of work.

b. Product data: Preprinted material such as illustrations, standard schedules, performance charts, instructions, brochures, diagrams, manufacturer's descriptive literature, catalog data, and other data to illustrate portion of work, but not prepared exclusively for this contract.

c. Samples: Physical examples of products, materials, equipment, assemblies, or workmanship that are physically identical to portion of work, illustrating portion of work or establishing standards for evaluating appearance of finished work or both.

d. Administrative submittals: Data presented for reviews and approval to ensure that administrative requirements of project are adequately met but not to ensure directly that work is in accordance with design concept and in compliance with contract documents.

1.3 SUBMITTAL IDENTIFICATION (SD)
Submittals required are identified by SD numbers and titles as follows:

SD-01 Preconstruction Submittals

Certificates of insurance.
Surety bonds.
List of proposed subcontractors.
List of proposed products.
Construction Progress Schedule.
Submittal schedule.
Schedule of values.
Health and safety plan.
Work plan.
Quality control plan.
Environmental protection plan.

SD-06 Test Reports

Report signed by authorized official of testing laboratory that a material, product or system identical to the material, product or system to be provided has been tested in accord with specified requirements. (Testing must have been within three years of date of contract award for the project.)

Report which includes findings of a test required to be performed by the contractor on an actual portion of the work or prototype prepared for the project before shipment to job site.

Report which includes finding of a test made at the job site or on sample taken from the job site, on portion of work during or after installation.

Investigation reports

Daily checklists

Final acceptance test and operational test procedure

SD-07 Certificates

Statements signed by responsible officials of manufacturer of product, system or material attesting that product, system or material meets specification requirements. Must be dated after award of project contract and clearly name the project.

Document required of Contractor, or of a supplier, installer or subcontractor through Contractor, the purpose of which is to further quality of orderly progression of a portion of the work by documenting procedures, acceptability of methods or personnel qualifications.

Confined space entry permits.

1.3.1 Approving Authority

Person authorized to approve submittal.

1.3.2 Work

As used in this section, on- and off-site construction required by contract documents, including labor necessary to produce construction and materials, products, equipment, and systems incorporated or to be incorporated in such construction.

1.4 SUBMITTALS

Submit the following in accordance with the requirements of this section.

SD-01 Preconstruction Submittals

Submittal register; G-AOF

1.5 USE OF SUBMITTAL REGISTER [DATABASE]

Prepare and maintain submittal register, as the work progresses. Use electronic submittal register program furnished by the Government or any other format. Do not change data which is output in columns (c), (d), (e), and (f) as delivered by government; retain data which is output in columns (a), (g), (h), and (i) as approved.

1.5.1 Submittal Register

Submit submittals as an electronic database, using submittals management program furnished to contractor. Submit with quality control plan and project schedule required by Section 01450A, "Quality Control" . Do not change data in columns (c), (d), (e), and (f) as delivered by the government. Verify that all submittals required for project are listed and add missing submittals. Complete the following on the database:

Column (a) Activity Number: Activity number from the project schedule.

Column (g) Contractor Submit Date: Scheduled date for approving authority to receive submittals.

Column (h) Contractor Approval Date: Date contractor needs approval of submittal.

Column (i) Contractor Material: Date that contractor needs material

delivered to contractor control.

1.5.2 Contractor Use of Submittal Register

Update the following fields in the government-furnished submittal register program or equivalent fields in program utilized by contractor.

Column (b) Transmittal Number: Contractor assigned list of consecutive numbers.

Column (j) Action Code (k): Date of action used to record contractor's review when forwarding submittals to QC.

Column (l) List date of submittal transmission.

Column (q) List date approval received.

1.5.3 Approving Authority Use of Submittal Register

Update the following fields in the government-furnished submittal register program or equivalent fields in program utilized by contractor.

Column (b).

Column (l) List date of submittal receipt.

Column (m) through (p).

Column (q) List date returned to contractor.

1.5.4 Contractor Action Code and Action Code

Entries used will be as follows (others may be prescribed by Transmittal Form):

NR - Not Received

AN - Approved as noted

A - Approved

RR - Disapproved, Revise, and Resubmit

1.5.5 Copies Delivered to the Government

Deliver one copy of submitted register updated by contractor to government with each invoice request. Deliver in electronic format, unless a paper copy is requested by contracting officer.

1.6 PROCEDURES FOR SUBMITTALS

1.6.1 Reviewing, Certifying, Approving Authority

QC organization shall be responsible for reviewing and certifying that submittals are in compliance with contract requirements. Approving authority on submittals is QC manager unless otherwise specified for specific submittal. At each "Submittal" paragraph in individual specification sections, a notation "G," following a submittal item, indicates contracting officer is approving authority for that submittal

item.

1.6.2 Constraints

a. Submittals listed or specified in this contract shall conform to provisions of this section, unless explicitly stated otherwise.

b. Submittals shall be complete for each definable feature of work; components of definable feature interrelated as a system shall be submitted at same time.

c. When acceptability of a submittal is dependent on conditions, items, or materials included in separate subsequent submittals, submittal will be returned without review.

d. Approval of a separate material, product, or component does not imply approval of assembly in which item functions.

1.6.3 Scheduling

a. Coordinate scheduling, sequencing, preparing and processing of submittals with performance of work so that work will not be delayed by submittal processing. Allow for potential requirements to resubmit.

b. Except as specified otherwise, allow review period, beginning with receipt by approving authority, that includes at least 15 working days for submittals for QC manager approval and 20 working days for submittals for contracting officer approval. Period of review for submittals with contracting officer approval begins when Government receives submittal from QC organization. Period of review for each resubmittal is the same as for initial submittal.

c. For submittals requiring review by fire protection engineer, allow review period, beginning when government receives submittal from QC organization, of 30 working days for return of submittal to the contractor. Period of review for each resubmittal is the same as for initial submittal.

1.6.4 Variations

Variations from contract requirements require Government approval pursuant to contract Clause entitled "FAR 52.236-21, Specifications and Drawings for Construction" and will be considered where advantageous to government.

1.6.4.1 Considering Variations

Discussion with contracting officer prior to submission, will help ensure functional and quality requirements are met and minimize rejections and resubmittals. When contemplating a variation which results in lower cost, consider submission of the variation as a Value Engineering Change Proposal (VECP).

1.6.4.2 Proposing Variations

When proposing variation, deliver written request to the contracting officer, with documentation of the nature and features of the variation and why the variation is desirable and beneficial to government. If lower cost

is a benefit, also include an estimate of the cost saving. In addition to documentation required for variation, include the submittals required for the item. Clearly mark the proposed variation in all documentation.

1.6.4.3 Warranting That Variations Are Compatible

When delivering a variation for approval, contractor warrants that this contract has been reviewed to establish that the variation, if incorporated, will be compatible with other elements of work.

1.6.4.4 Review Schedule Is Modified

In addition to normal submittal review period, a period of 10 working days will be allowed for consideration by the Government of submittals with variations.

1.6.5 Contractor's Responsibilities

a. Determine and verify field measurements, materials, field construction criteria; review each submittal; and check and coordinate each submittal with requirements of the work and contract documents.

b. Transmit submittals to QC organization in accordance with schedule on approved Submittal Register, and to prevent delays in the work, delays to government, or delays to separate contractors.

c. Advise contracting officer of variation, as required by paragraph entitled "Variations."

d. Correct and resubmit submittal as directed by approving authority. When resubmitting disapproved transmittals or transmittals noted for resubmittal, the contractor shall provide copy of that previously submitted transmittal including all reviewer comments for use by approving authority. Direct specific attention in writing or on resubmitted submittal, to revisions not requested by approving authority on previous submissions.

e. Furnish additional copies of submittal when requested by contracting officer, to a limit of 20 copies per submittal.

f. Complete work which must be accomplished as basis of a submittal in time to allow submittal to occur as scheduled.

g. Ensure no work has begun until submittals for that work have been returned as "approved," or "approved as noted", except to the extent that a portion of work must be accomplished as basis of submittal.

1.6.6 QC Organization Responsibilities

a. Note date on which submittal was received from contractor on each submittal.

b. Review each submittal; and check and coordinate each submittal with requirements of work and contract documents.

c. Review submittals for conformance with project design concepts and compliance with contract documents.

d. Act on submittals, determining appropriate action based on QC organization's review of submittal.

(1) When QC manager is approving authority, take appropriate action on submittal from the possible actions defined in paragraph entitled, "Actions Possible."

(2) When contracting officer is approving authority or when variation has been proposed, forward submittal to Government with certifying statement or return submittal marked "not reviewed" or "revise and resubmit" as appropriate. The QC organization's review of submittal determines appropriate action.

e. Ensure that material is clearly legible.

f. Stamp each sheet of each submittal with QC certifying statement or approving statement, except that data submitted in bound volume or on one sheet printed on two sides may be stamped on the front of the first sheet only.

(1) When approving authority is contracting officer, QC organization will certify submittals forwarded to contracting officer with the following certifying statement:

"I hereby certify that the equipment and material shown and marked in this submittal is that proposed to be incorporated with contract Number DACW35-02-R-0010, is in compliance with the contract drawings and specification, can be installed in the allocated spaces, and is submitted for Government approval.

Certified by Submittal Reviewer _____, Date _____
(Signature when applicable)

Certified by QC manager _____, Date _____"
(Signature)

(2) When approving authority is QC manager, QC manager will use the following approval statement when returning submittals to contractor as "Approved" or "Approved as Noted."

"I hereby certify that the material and equipment shown and marked in this submittal and proposed to be incorporated with contract Number DACW35-02-R-0010, is in compliance with the contract drawings and specification, can be installed in the allocated spaces, and is _____ approved for use.

Certified by Submittal Reviewer _____, Date _____
(Signature when applicable)

Approved by QC manager _____, Date _____"
(Signature)

g. Sign certifying statement or approval statement. The person signing certifying statements shall be QC organization member designated in the approved QC plan. The signatures shall be in original ink. Stamped signatures are not acceptable.

h. Update submittal register [database]as submittal actions occur

and maintain the submittal register at project site until final acceptance of all work by contracting officer.

i. Retain a copy of approved submittals at project site, including contractor's copy of approved samples.

1.6.7 Government's Responsibilities

When approving authority is contracting Officer, the Government will:

a. Note date on which submittal was received from QC manager, on each submittal for which the contracting officer is approving authority.

b. Review submittals for approval within scheduling period specified and only for conformance with project design concepts and compliance with contract documents.

c. Identify returned submittals with one of the actions defined in paragraph entitled "Actions Possible" and with markings appropriate for action indicated.

1.6.8 Actions Possible

Submittals will be returned with one of the following notations:

a. Submittals marked "not reviewed" will indicate submittal has been previously reviewed and approved, is not required , does not have evidence of being reviewed and approved by contractor, or is not complete. A submittal marked "not reviewed" will be returned with an explanation of the reason it is not reviewed. Resubmit submittals returned for lack of review by contractor or for being incomplete, with appropriate action, coordination, or change.

b. Submittals marked "approved" "approved as submitted" authorize contractor to proceed with work covered.

c. Submittals marked "approved as noted" or "approval except as noted; resubmission not required" authorize contractor to proceed with work as noted provided contractor takes no exception to the notations.

d. Submittals marked "revise and resubmit" or "disapproved" indicate submittal is incomplete or does not comply with design concept or requirements of the contract documents and shall be resubmitted with appropriate changes. No work shall proceed for this item until resubmittal is approved.

1.7 FORMAT OF SUBMITTALS

1.7.1 Transmittal Form

Transmit each submittal, except sample installations and sample panels, to office of approving authority. Transmit submittals with transmittal form prescribed by contracting officer and standard for project. The transmittal form shall identify contractor, indicate date of submittal, and include information prescribed by transmittal form and required in paragraph entitled "Identifying Submittals." Process transmittal forms to record actions regarding sample panels and sample installations.

1.7.2 Identifying Submittals

Identify submittals, except sample panel and sample installation, with the following information permanently adhered to or noted on each separate component of each submittal and noted on transmittal form. Mark each copy of each submittal identically, with the following:

a. Project title and location.

b. Construction contract number.

c. Section number of the specification section by which submittal is required.

d. Submittal description (SD) number of each component of submittal.

e. When a resubmission, add alphabetic suffix on submittal description, for example, SD-10A, to indicate resubmission.

f. Name, address, and telephone number of subcontractor, supplier, manufacturer and any other second tier contractor associated with submittal.

g. Product identification and location in project.

1.7.3 Format for Product Data

a. Present product data submittals for each section as a complete, bound volume. Include table of contents, listing page and catalog item numbers for product data.

b. Indicate, by prominent notation, each product which is being submitted; indicate specification section number and paragraph number to which it pertains.

c. Supplement product data with material prepared for project to satisfy submittal requirements for which product data does not exist. Identify this material as developed specifically for project.

1.7.4 Format for Shop Drawings

a. Shop drawings shall not be less than 8 1/2 by 11 inches nor more than 30 by 42 inches.

b. Present 8 1/2 by 11 inches sized shop drawings as part of the bound volume for submittals required by section. Present larger drawings in sets.

c. Include on each drawing the drawing title, number, date, and revision numbers and dates, in addition to information required in paragraph entitled "Identifying Submittals."

d. Dimension drawings, except diagrams and schematic drawings; prepare drawings demonstrating interface with other trades to scale. Shop drawing dimensions shall be the same unit of measure as indicated on the contract drawings. Identify materials and

products for work shown.

1.7.5 Format of Administrative Submittals

a. When submittal includes a document which is to be used in project or become part of project record, other than as a submittal, do not apply contractor's approval stamp to document, but to a separate sheet accompanying document.

b. Operation and Maintenance Manual Data: Submit in accordance with Section 01781N, "Operation and Maintenance Data." Include components required in that section and the various technical sections.

1.8 QUANTITY OF SUBMITTALS

1.8.1 Number of Copies of Product Data

a. Submit six copies of submittals of product data requiring review and approval only by QC organization and seven copies of product data requiring review and approval by contracting officer.

1.8.2 Number of Copies of Shop Drawings

Submit shop drawings in compliance with quantity requirements specified for product data.

1.9 FORWARDING SUBMITTALS

1.9.1 Samples Required of the Contractor

Submit samples to Soo Area Office, Sault Ste. Marie, Michigan.

1.9.2 Shop Drawings, Product Data, and O&M Data

As soon as practicable after award of contract, and before procurement of fabrication, submit, except as specified otherwise, to the Detroit Area Office, Detroit, Michigan , the shop drawings, product data and O&M Data required in the technical sections of this specification. Detroit Area Office, Detroit, Michigan will review and provide surveillance for the Contracting Officer to determine if Contractor-approved submittals comply with the contract requirements, and will review and approve for the Contracting Officer those submittals not permitted to be Contractor approved to determine if submittals comply with the contract requirements. One copy of the transmittal form for submittals shall be forwarded to the Resident Officer in Charge of Construction

1.10 SUBMITTAL CLASSIFICATION

Submittals are classified as follows:

1.10.1 Government Approved

Government approval is required for extensions of design, critical materials, deviations, equipment whose compatibility with the entire system must be checked, and other items as designated by the Contracting Officer.

Within the terms of the Contract Clause entitled "Specifications and Drawings for Construction," they are considered to be "shop drawings."

1.11 APPROVED SUBMITTALS

The Contracting Officer's approval of submittals shall not be construed as a complete check, but will indicate only that the general method of construction, materials, detailing and other information are satisfactory. Approval will not relieve the Contractor of the responsibility for any error which may exist, as the Contractor under the Contractor Quality Control (CQC) requirements of this contract is responsible for dimensions, the design of adequate connections and details, and the satisfactory construction of all work. After submittals have been approved by the Contracting Officer, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

1.12 DISAPPROVED SUBMITTALS

The Contractor shall make all corrections required by the Contracting Officer and promptly furnish a corrected submittal in the form and number of copies specified for the initial submittal. If the Contractor considers any correction indicated on the submittals to constitute a change to the contract, a notice in accordance with the Contract Clause "Changes" shall be given promptly to the Contracting Officer.

1.13 WITHHOLDING OF PAYMENT

Payment for materials incorporated in the work will not be made if required approvals have not been obtained.

1.14 GENERAL

The Contractor shall make submittals as required by the specifications. The Contracting Officer may request submittals in addition to those specified when deemed necessary to adequately describe the work covered in the respective sections. Units of weights and measures used on all submittals shall be the same as those used in the contract drawings. Each submittal shall be complete and in sufficient detail to allow ready determination of compliance with contract requirements. Prior to submittal, all items shall be checked and approved by the Contractor's Quality Control (CQC) System Manager and each item shall be stamped, signed, and dated by the CQC System Manager indicating action taken. Proposed deviations from the contract requirements shall be clearly identified. Submittals shall include items such as: Contractor's, manufacturer's, or fabricator's drawings; descriptive literature including (but not limited to) catalog cuts, diagrams, operating charts or curves; test reports; test cylinders; samples; O&M manuals (including parts list); certifications; warranties; and other such required submittals. Submittals requiring Government approval shall be scheduled and made prior to the acquisition of the material or equipment covered thereby. Samples remaining upon completion of the work shall be picked up and disposed of in accordance with manufacturer's Material Safety Data Sheets (MSDS) and in compliance with existing laws and regulations.

1.15 SUBMITTAL REGISTER

At the end of this section is a submittal register showing items of equipment and materials for which submittals are required by the

specifications; this list may not be all inclusive and additional submittals may be required. The Contractor shall maintain a submittal register for the project in accordance with Section 01312A QUALITY CONTROL SYSTEM (QCS).

1.16 SCHEDULING

Submittals covering component items forming a system or items that are interrelated shall be scheduled to be coordinated and submitted concurrently. Certifications to be submitted with the pertinent drawings shall be so scheduled. Adequate time (a minimum of 10 calendar days exclusive of mailing time) shall be allowed and shown on the register for review and approval. No delay damages or time extensions will be allowed for time lost in late submittals.

1.17 TRANSMITTAL FORM (ENG FORM 4025)

The sample transmittal form (ENG Form 4025) attached to this section shall be used for submitting both Government approved and information only submittals in accordance with the instructions on the reverse side of the form. These forms are included in the Quality Control System (QCS) software that the Contractor is required to use for this contract. This form shall be properly completed by filling out all the heading blank spaces and identifying each item submitted. Special care shall be exercised to ensure proper listing of the specification paragraph and/or sheet number of the contract drawings pertinent to the data submitted for each item.

1.18 SUBMITTAL PROCEDURES

Submittals shall be made as follows:

1.18.1 Procedures

1.18.2 Deviations

For submittals which include proposed deviations requested by the Contractor, the column "variation" of ENG Form 4025 shall be checked. The Contractor shall set forth in writing the reason for any deviations and annotate such deviations on the submittal. The Government reserves the right to rescind inadvertent approval of submittals containing unnoted deviations.

1.19 CONTROL OF SUBMITTALS

The Contractor shall carefully control his procurement operations to ensure that each individual submittal is made on or before the Contractor scheduled submittal date shown on the approved "Submittal Register."

1.20 GOVERNMENT APPROVED SUBMITTALS

Upon completion of review of submittals requiring Government approval, the submittals will be identified as having received approval by being so stamped and dated. 5 copies of the submittal will be retained by the Contracting Officer and 2 copies of the submittal will be returned to the Contractor.

1.21 STAMPS

Stamps used by the Contractor on the submittal data to certify that the submittal meets contract requirements shall be similar to the following:

CONTRACTOR

(Firm Name)

_____ Approved

_____ Approved with corrections as noted on submittal data and/or attached sheets(s).

SIGNATURE: _____

TITLE: _____

DATE: _____

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

-- End of Section --

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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01440

CONTRACTOR QUALITY CONTROL

-- End of Section Table of Contents --

SECTION 01440

CONTRACTOR QUALITY CONTROL

PART 1 GENERAL (NOT APPLICABLE)

1.1 SUBMITTALS

Government approval is required for submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with SECTION 01330, entitled "SUBMITTAL PROCEDURES":

SD-01 Data

Quality Control Plan; GA-AOF

At least ten (10) calendar days prior to commencing work submit a Quality Control Plan.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

3.1 GENERAL

The Contractor is responsible for quality control and shall establish and maintain an effective quality control system in compliance with Clause titled "INSPECTION OF CONSTRUCTION." The quality control system shall consist of plans, procedures, and organization necessary to produce an end product which complies with the contract requirements. The system shall cover all construction operations, both on-site and off-site, and shall be keyed to the proposed construction sequence.

3.2 QUALITY CONTROL PLAN

3.2.1 General

The Contractor shall furnish for review by the Government, not later than 10 days after receipt of notice to proceed, the Contractor Quality Control (CQC) Plan proposed to implement the requirements of Clause titled "INSPECTION OF CONSTRUCTION." The plan shall identify personnel, procedures, control, instructions, records, and forms to be used. The Government will consider an interim plan for the first 30 days of operation. Construction will be permitted to begin only after acceptance of the CQC Plan or acceptance of an interim plan applicable to the particular feature of work to be started. Work outside of the features of work included in an accepted interim plan will not be permitted to begin until acceptance of a CQC Plan or another interim plan containing the additional features of work to be started.

3.2.2 Content of the CQC Plan

The CQC plan shall include, as a minimum, the following to cover all construction operations, both on-site and off-site, including work by subcontractors:

a. A description of the quality control organization, including a chart showing lines of authority and acknowledgment that the CQC staff shall implement the three phase control system for all aspects of the work specified. The staff shall include a CQC system manager who shall report to the project manager or someone higher in the Contractor's organization. Project manager in this context shall mean the individual with responsibility for the overall management of the project including quality and production.

b. The name, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a QC function.

c. A copy of the letter to the CQC System Manager signed by an authorized official of the firm which describes the responsibilities and delegates sufficient authorities to adequately perform the functions of the CQC System Manager including authority to stop work which is not in compliance with the contract. The CQC System Manager shall issue letters of direction to all other various quality control representatives outlining duties, authorities and responsibilities. Copies of these letters shall also be furnished to the Government.

d. Procedures for scheduling, reviewing, certifying, and managing submittals, including those of subcontractors. These procedures shall be in accordance with SECTION 01305, "SUBMITTAL PROCEDURES".

e. Procedures for tracking preparatory, initial, and follow-up control phases, including documentation.

f. Procedures for tracking construction deficiencies from identification through acceptable corrective action. These procedures will establish verification that identified deficiencies have been corrected.

g. Reporting procedures, including proposed reporting formats.

h. A list of the definable features of work. A definable feature of work is a task which is separate and distinct from other tasks and has separate control requirements. This list shall be as agreed upon during the coordination meeting.

3.2.3 Acceptance of Plan

Acceptance of the Contractor's plan is required prior to the start of construction. Acceptance is conditional and will be predicated on satisfactory performance during the construction. The Government reserves the right to require the Contractor to make changes in its CQC plan and operations including removal of personnel, as necessary, to obtain the quality specified.

3.2.4 Changes to Plan

After acceptance of the QC plan, the Contractor shall submit any proposed QC plan changes to the Contracting Officer in writing a minimum of 7 calendar days prior to the proposed implementation date for the change. Changes to the plan shall not be made prior to the Contracting Officer's

approval of the change.

3.3 COORDINATION MEETING

Immediately after adjournment of the required Preconstruction Conference, before start of construction, and prior to acceptance by the Government of the Quality Control Plan, the Contractor shall meet with the Contracting Officer or Authorized Representative and discuss the Contractor's quality control system. A draft copy of the CQC Plan shall be provided to the Government at least three working days prior to the CQC meeting. During the meeting, a mutual understanding of the system details shall be developed, including the forms for recording the CQC operations, control activities, administration of the system for both on-site and off-site work, and the interrelationship of the Contractor's Management and control with the Government's Quality Assurance. Minutes of the meeting will be prepared by the Government and are to be signed by both the Contractor and the Contracting Officer or the Contracting Officer's Representative. The minutes shall be separate from the Preconstruction Conference minutes and shall become a part of the contract file. There may be occasions when subsequent conferences will be called by either party to reconfirm mutual understandings and/or address deficiencies in the CQC system or procedures which may require corrective action by the Contractor.

3.3.1 Finalize CQC Plan

Immediately following the Preconstruction Conference, the Contractor shall finalize the CQC plan, taking into account comments made at the conference, and shall formally submit the CQC plan for acceptance. The Contractor shall allow up to 10 calendar days for review and acceptance of the finalized submittal.

3.4 QUALITY CONTROL ORGANIZATION

3.4.1 CQC System Manager

The Contractor shall identify an individual within its organization who shall be responsible for overall management of CQC and have the authority to act in all CQC matters for the Contractor. This CQC System Manager shall be on the site at all times during construction and shall be employed by the Contractor, unless otherwise approved by the Contracting Officer. An alternate for the CQC System Manager shall be identified in the plan to serve in the event of the system manager's absence. All CQC staff members shall be subject to acceptance by the Contracting Officer. The CQC system manager and alternate shall be experienced construction persons with each having a minimum of 3 years experience in related work. The CQC system manager shall be assigned as system manager but may have other duties in addition to quality control.

3.4.2 Organizational Changes

The Contractor shall obtain Contracting Officer's acceptance before replacing any member of the CQC staff. Requests shall include the names, qualifications, duties, and responsibilities of each proposed replacement.

3.5 Additional Requirements

In addition to the above experience and education requirements the CQC System Manager shall have completed the course titled "Construction Quality Management For Contractors". This course is periodically offered at one or

more of the Area Offices within the District.

3.6 SUBMITTALS

Submittals shall be as specified in SECTION 01305 "SUBMITTAL PROCEDURES". The CQC organization shall be responsible for certifying that all submittals are in compliance with the contract requirements.

3.7 CONTROL

Contractor Quality Control is the means by which the Contractor ensures that the construction, to include that of subcontractors, complies with the requirements of the contract. The controls shall be adequate to cover all construction operations and will be keyed to the proposed construction sequence. The controls shall include at least three phases of control to e conducted by the CQC system manager for all definable features of work, s follows:

3.7.1 Preparatory Phase

This phase shall be performed prior to beginning work on each definable feature of work and shall include:

a. A review of each paragraph of applicable specifications.

b. A review of the contract plans.

c. A check to assure that all required submissions have been made and approved.

d. A check to assure that provisions have been made to provide required control inspection.

e. Examination of the work area to assure that all required preliminary work has been completed and is in compliance with the contract.

f. A review of the appropriate activity hazard analysis to assure safety requirements are met.

g. Discussion of procedures for constructing the work including repetitive deficiencies. Document construction tolerances and workmanship standards for that phase of work.

h. A check to ensure that the CQC plan for the work to be performed has been accepted by the Contracting Officer.

i. The Government shall be notified at least 24 hours in advance of beginning any of the required action of the preparatory phase. This phase shall include a meeting conducted by the CQC system manager and attended by the superintendent, other CQC personnel (as applicable), and the foreman responsible for the definable feature. The results of the preparatory phase actions shall be documented by a completed checklist and by separate minutes prepared by the CQC system manager and attached to the daily QC report. The Contractor shall instruct applicable workers as to the acceptable level of workmanship required in order to meet contract requirements.

3.7.2 Initial Phase

This phase shall be accomplished at the beginning of a definable feature of work. The following shall be accomplished:

a. A check of preliminary work to ensure that it is in compliance with contract requirements. Review minutes of the preparatory meeting.

b. Verification of full contract compliance. Verify required control inspection.

c. Establish level of workmanship and verify that it meets minimum acceptable workmanship standards.

d. Resolve all differences.

e. Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis. Review the activity analysis with each worker.

f. The Government shall be notified at least 24 hours in advance of beginning the initial phase. A completed checklist of this phase shall be prepared by the CQC system manager and attached to the daily QC report. Exact location of initial phase shall be indicated for future reference and comparison with follow-up phases.

g. The initial phase should be repeated for each new crew to work on-site, or any time acceptable specified quality standards are not being met.

3.7.3 Follow-up Phase

Daily checks shall be performed to assure continuing compliance with contract requirements until completion of the particular feature of work. The checks shall be made a matter of record in the CQC documentation. Final follow-up checks shall be conducted and all deficiencies corrected prior to the start of additional features of work which may be affected by the deficient work.

3.7.3.1 Implementation of Government Resident Management System (RMS)

The Contractor shall utilize the Government-furnished CQC Management Report, NCE Form 63 for its daily reports. (Copy available at Area Offices). Other Contractor desired reporting forms may be used in addition to this form. On the Government-furnished Input Forms available at Area Offices for use with the RMS, the Contractor shall provide the following information: Prime Contractor staffing; letter codes; subcontractor information showing trade, name, address, and insurance expiration days; definable features of work from a Government provided dictionary (may be expanded by the Contractor, as approved); pay activity and activity information, including minimum and maximum durations for each activity in a separated listing; required Quality Control tests (as applicable) tied to section, bid items number, description, activity number, review period and expected procurement period; and user schooling information (as applicable). See also SECTION 01305, SUBMITTAL PROCEDURES, Paragraph, contract amount, and all Bid Items and Additives shall be separately identified, in accordance with the BIDDING SCHEDULE. This data shall be provided prior to any contract payment, to the satisfaction of the

Contracting Officer, and shall be updated as required.

(1) Prime Contractor staffing

(2) letter codes which the Contractor wishes to use in addition to those supplied with the program libraries. A list of current existing codes is provided in SECTION 01999.

(3) subcontractor information showing trade, name, address, and insurance expiration dates

(4) Definable features of work from a Government provided dictionary (may be expanded by the Contractor, as approved).

(5) Pay activity and activity information, including minimum and maximum durations for each activity on a separate listing. The sum of all activity values shall equal the contract amount and, all Bid Items and Additives shall be separately identified, in accordance with the BIDDING SCHEDULE. Bid Items may include multiple activities, but activities may only be assigned to one such Bid Item. All of the data listed in this Subpart 6 shall be provided and the RMS CQC module shall be completed to the satisfaction of the Contracting Officer prior to any contract payments (except payments for bonds, insurance and/or mobilization as approved by the Contracting Officer) and shall be updated as required.

(6) Required Quality Control tests (as applicable) tied to individual activities. The QC Reports/QC Requirements function of the RMS QC Module will be used to meet the requirements for tracking of verification and acceptance testing specified in the paragraph titled "Content of the CQC Plan".

(7) Submittal information relating to specification section, bid item number, description, activity number, review period and expected procurement period

(8) User schooling information (as applicable).

The above items shall be incorporated into the required submittal for the Contractor's Quality Control Plan required in the paragraph titled "QUALITY CONTROL PLAN" of this Section.

a. During the course of the contract, the Contractor will receive various Quality Assurance comments from the Government that will reflect corrections needed to Contractor activities or reflect outstanding or future items needing the attention of the Contractor. The Contractor shall acknowledge receipt of these comments by specific number reference on its Daily CQC Report, and will also reflect on his Daily CQC Report when these items are specifically completed or corrected to permit Government verification. The contractor will use the QC COMMENTS function of the RMS QC Module to meet the requirements for tracking construction deficiencies as specified in paragraph titled, "Content of the CQC Plan".

b. The Contractor's schedule system shall include, as specified and separate activities, all Preparatory Phase Meetings (inspections); all O&M Manuals (as applicable) and all Test Plans of Electrical and Mechanical Equipment or Systems that require validation testing or

instructions to Contracting Officer Representatives (as applicable).

3.7.4 Additional Preparatory and Initial Phases

Additional preparatory and initial phases may be conducted on the same definable features of work as determined by the Government if the quality of on-going work is unacceptable; or if there are changes in the applicable QC staff or in the on-site production supervision or work crew; or if work on a definable feature is resumed after a substantial period of inactivity, or if other problems develop.

3.8 COMPLETION INSPECTION

At the completion of all work the CQC system manager shall conduct an inspection of the work and develop a "punch list" of items which do not conform to the approved plans and specifications. Such a list of deficiencies shall be included in the CQC documentation, as required by paragraph "DOCUMENTATION" below, and shall include the estimated date by which the deficiencies will be corrected. The CQC system manager or staff shall make a second inspection to ascertain that all deficiencies have been corrected and so notify the Government. These inspections and any deficiency corrections required by this paragraph shall be accomplished within the time stated for completion of the entire work or any particular increment thereof if the project is divided into increments by separate completion dates.

3.9 DOCUMENTATION

The Contractor shall maintain current records of quality control operations, activities, and tests performed, including the work of subcontractors. These records shall be on an acceptable form and shall include factual evidence that required quality control activities and/or tests have been performed, including but not limited to the following:

a. Contractor/subcontractor and their area of responsibility.

b. Operating plant/equipment with hours worked, idle, or down for repair.

c. Work performed today, giving location, description, and by whom. For dredging projects, the report shall always include the character and types of materials removed. Whenever there is a significant change in the materials, the location of such change shall be included in the reports.

d. Control activities performed with results and references to specifications/plan requirements. The control phase should be identified (Preparatory, Initial, Follow-up). List deficiencies noted along with corrective action.

e. Identify submittals reviewed, with contract reference, by whom, and action taken.

f. Off-site surveillance activities, including actions taken.

g. Job safety evaluations stating what was checked, results, and instructions or corrective actions.

h. List instructions given/received and conflicts in plans and/or

specifications.

i. Contractor's verification statement.

j. These records shall indicate a description of trades working on the project; the number of personnel working; weather conditions encountered; and any delays encountered. These records shall cover both conforming and deficient features and shall include a statement that the workmanship complies with the contract. The original and one copy of these records in report form shall be furnished to the Government daily within 24 hours after the date(s) covered by the report, except that reports need not be submitted for days on which no work is performed. All calendar days shall be accounted for throughout the life of the contract. The first report following a period of no work shall be for that day and all the no-work days since the last reported work day. Reports shall be sequentially numbered for this project, signed and dated by the CQC system manager. The report from the CQC system manager shall include copies of reports prepared by all subordinate quality control personnel.

3.10 SAMPLE FORMS

Sample forms for the CQC Management Report, Preparatory Inspection Checklist, Initial Inspection Checklist, and other required reports and plans are available at the Detroit District Area Offices. The Contractor shall tailor the checklists to include all reporting and quality control requirements specific to this project.

3.11 NOTIFICATION OF NONCOMPLIANCE

The Contracting Officer will notify the Contractor of any detected noncompliance with the foregoing requirements. The Contractor shall, after receipt of such notice, immediately take corrective action. Such notice, when delivered to the Contractor at the site of the work, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor or subcontractor.

--End of Section--

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01999

LISTING OF ENCLOSED DOCUMENTS, EXHIBITS AND OTHER ATTACHMENTS

-- End of Section Table of Contents --

SECTION 01999

LISTING OF ENCLOSED DOCUMENTS, EXHIBITS AND OTHER ATTACHMENTS

PART 1 GENERAL

1.1 ENCLOSURES

This Section contains documents referenced in other Sections of the specifications. They are consolidated in this Section for the convenience of the Contractor and the Government. The Contractor may reproduce the enclosed forms for its use or obtain a supply of the forms from the Contracting Officer.

TITLE

CONSTRUCTION QUALITY MANAGEMENT REPORT - NCE FORM 63, 6 MAY 77. (2 Sides)

PREPARATORY INSPECTION CHECKLIST (3 SIDES)

INITIAL INSPECTION CHECKLIST (2 SIDES)

ACCIDENT PREVENTION PROGRAM ACTIVITY HAZARD ANALYSIS- NCE FORM 129, 6 JUNE 1986.

RESIDENT MANAGEMENT SYSTEM FORMS (SAMPLES)

A. CURRENT ACTIVITY SUMMARY (SMPL)

B. INITIAL INSPECTION WORKSHEET

C. PREPARATORY INSPECTION WORKSHEET

D. CONTRACTOR QUALITY CONTROL REPORT (QCR)

E. TRANSMITTAL SHEET (4025-R)

TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATIONS OF COMPLIANCE ENG FORM 4025, MAY 91 (2 SIDES)

SUBMITTAL REGISTER - ENG FORM 4288, MAY 91

BENCHMARKS AND HORIZONTAL CONTROL DATA

GENERAL DECISION NO. IL030018

GENERAL DECISION NO. MI030007

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

--End of Section--

CONSTRUCTION QUALITY CONTROL MANAGEMENT

DATE_____ REPORT_____
CONTRACTOR _____ CONTRACT NO._____
PROJECT NAME _____ LOCATION _____
WEATHER TYPE_____ TEMP. MAX_____ MIN_____ RAINFALL_____ GAGE READING_____
EMPLOYEES: SUPV._____SKILLED_____ LABORERS_____LENGTH OF SHIFT _____HR_____

WORK RESPONSIBILITY: NAME (PRIME OR SUBCONTRACTOR) AND AREA OF RESPONSIBILITY .
A._____

B. _____

C. _____

D. _____

E. _____

WORK PERFORMED TODAY: (LOCATION, DESCRIPTION, QUANTITY AND RESPONSIBILITY BY LETTER REFERENCE
(Relate to Items on the Progress Chart or CPM)

INSPECTION: (DESCRIPTION OF INSPECTION AND LOCATION. INCLUDE OFF-SITE, MATERIALS AND EQUIPMENT INSPECTION.)

A. PREPARATORY PHASE:

B. INITIAL PHASE:

C. CONTINUOUS PHASE:

RESULTS OF INSPECTION: (INCLUDE FINDINGS, DEFICIENCIES OBSERVED & CORRECTIVE ACTION)

NCE FORM 63 EDITION OF 22 JUNE 76 IS OBSOLETE
6 MAY 77

RESULTS OF SURVEILLANCE CONTINUED:

_____

TEST PERFORMED: TYPE, LOCATION, RESULTS INCLUDING FAILURES & REMEDIAL ACTION, (ATTACH COPY OF TEST REPORT OR NOTATION WHEN IT WILL BE FURNISHED.)

_____

WORK ITEMS BEHIND SCHEDULE: REASON, EFFECT ON PROGRESS SCHEDULE AND ACTION TAKEN.

_____

JOB SAFETY: (REPORT CONDITIONS, DEFICIENCIES, CORRECTIVE ACTION & RESULTS.)

_____

REMARKS: LIST ATTACHMENT AND OTHER MANAGEMENT ACTIONS TAKEN TO ASSURE QUALITY CONSTRUCTION

IF INSPECTION & RESULTS ARE NOT LISTED THEN IT IS ASSUMED THAT QUALITY CONTROL IS NOT BEING IMPLEMENTED.
THE ABOVE REPORT IS COMPLETE AND CORRECT AND ALL MATERIALS & SUPPLIES INCORPORATED IN THE WORK ARE IN COMPLIANCE WITH THE TERMS OF THE CONTRACT EXCEPT AS NOTED:

_____
CONTRACTOR'S APPROVED REPRESENTATIVE SIGNATURE

PREPARATORY INSPECTION CHECKLIST

CONTRACT NO:_____ DATE:_____

TITLE:_____ SPECS. SECTION:_____

MAJOR DEFINABLE SEGMENT OF WORK:_____

A. PERSONNEL PRESENT:

	NAME	POSITION	COMPANY
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____
7.	_____	_____	_____
8.	_____	_____	_____
9.	_____	_____	_____
10.	_____	_____	_____

B. TRANSMITTAL INVOLVED:

	NUMBER & ITEM	CODE	CONTRACTOR OR GOVERNMENT APPROVAL
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____

PREPARATORY INSPECTION CHECKLIST

B-I. Have all items involved been approved Yes_____ No_____

B-II. What item have not been approved?

	ITEM	STATUS
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____

C. Are all materials on hand? Yes_____No_____

C-I. Are all materials on hand accordance with approvals? Yes_____No_____

C-II. Items not on hand or not in accordance with transmittals:

1. _____
2. _____
3. _____
4. _____

D. Test required in accordance with contract requirements:

	TEST	PARAGRAPH
1.	_____	_____
2.	_____	_____
3.	_____	_____

PREPARATORY INSPECTION CHECKLIST

E. ACCIDENT PREVENTION PREPLANNING – HAZARD CONTROL MEASURES:

E-1 Applicable Outlines)Attach completed copies):

1. _____
2. _____
3. _____
4. _____
5. _____

E-II Operational Equipment Checklist

ATTACHED FOR:

1. _____
2. _____
3. _____

ON FILE FOR:

1. _____
2. _____
3. _____

_____
QUALITY CONTROL – PRIME CONTRACTOR

INITIAL INSPECTION CHECKLIST

CONTRACT NO: _____ DATE: _____

Description and Location of Work Inspected: _____

_____ Specs. Section:_____

REFERENCE CONTRACT DRAWING:

_____

A. PERSONNEL PRESENT :

	NAME	POSITION	COMPANY
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____
7.	_____	_____	_____
8.	_____	_____	_____
9.	_____	_____	_____
10.	_____	_____	_____

B. MATERIALS BEING USED ARE IN STRICT COMPLIANCE WITH THE CONTRACT PLANS

AND SPECIFICATION: YES_____ NO_____

IF NOT,EXPLAIN:_____

_____

_____

INITIAL INSPECTION CHECKLIST

C. PROCEDURES AND WORK METHODS WITNESSED ARE IN STRICT COMPLIANCE WITH THE REQUIREMENTS OF THE CONTRACT SPECIFICATIONS: YES____ NO_____
IF NOT, EXPLAIN: _____

D. WORKMANSHIP IS ACCEPTABLE: YES_____ NO _____ STATE AREAS WHERE IMPROVEMENT IS NEEDED: _____

E. SAFETY VIOLATIONS AND CORRECTIVE ACTION TAKEN: _____

_____
QUALITY CONTROL REPRESENTATIVE

ACCIDENT PREVENTION PROGRAM
ACTIVITY HAZARD ANALYSIS

Page of

1. Contract No.	2. Project	3. Facility
4. Date	5. Location	6. Estimated Start Date

7. Item	8. Phase of Work	9. Safety Hazard	10. Precautionary Action Taken

11. Contractor (Signature & Date)

12. Report discussed with contractor/ superintendent on	13. Contracting Officer (Signature & Date)

US Army Corps of Engineers

Current Activity Summary

08 Jul 2002

Project Name: Repair of North & South Piers, Baloney Harbor, MI
Contract Number: DACW35-02-C-####

Location Name

Activity Number	Activity Description	QUANTITY	UNIT PRICE	AMOUNT
CLIN 0001	***North and South Pier Repairs***	***1***	***$3,437,787.18 / LS***	***$3,437,787.18***
1001	Bonds			$49,136.00
1002A	Prepare & Mobilize Equipment			$94,864.00
1002B	Prepare Site			$72,500.00
1002C	Office Trailers & Utilities			$22,500.00
1003A	Demobilize Equipment			$5,000.00
1003B	Site Restoration			$2,500.00
1003C	As-Built Drawings			$2,500.00
1004A	Furnish SSP			$750,000.00
1004B	Furnish Special Piles			$50,000.00
1004C	Furnish SSP Pile Shoes			$30,000.00
1004D	Fabricate Template			$6,000.00
1004E	Excavate Driving Line			$100,000.00
1004F	Set & Drive SSP			$500,000.00
1004G	Backfill Driving Line			$50,000.00
1004I	South Driving Line Obstruction Removal			$117,787.18
1005A	Furnish Misc. Steel			$193,000.00
1005B	Furnish Tie-Rods			$20,000.00
1005C	Furnish Plate Washers			$15,000.00
1005D	Furnish Fastners			$12,000.00
1005E	Place Misc. Steel			$280,000.00
1006A	Demo Concrete & Remove (Rubblemound)			$100,000.00
1006B	Excavate Existing Cribs (Rubblemound Area)			$185,000.00
1006C	Disposal of Demo Materials (Rubblemound Area)			$25,000.00
1007A	Furnish H-Pile Materials			$22,800.00
1007B	Install H-Piles			$27,200.00
1008A	Furnish Rebar			$135,000.00
1008B	Place Concrete (2000 CY @ $250.00/CY)			$500,000.00
1009A	Furnish Handrails			$60,000.00
1009B	Place Handrails			$7,000.00
1009C	Paint Handrails			$3,000.00
				$3,437,787.18
CLIN 0002	***Fill Stone:***	***0***	***$0.00 / NA***	***$0.00***
	No Activities Assigned to this Bid Item.			
CLIN 0002AA	***First 18,000 tons***	***18,000***	***$22.50 / TN***	***$405,000.00***
2001	Furnish & Place Fill Stone - 1st 18,000 Tons			$405,000.00
				$405,000.00
CLIN 0002AB	***Over 10,000 tons***	***2,000***	***$22.50 / TN***	***$45,000.00***
2101	Furnish & Place Fill Stone - Over 18,000 Tons			$45,000.00
				$45,000.00
CLIN 0003	***Underlayer Stone:***	***0***	***$0.00 / NA***	***$0.00***
	No Activities Assigned to this Bid Item.			
CLIN 0003AA	***First 4,500 Tons***	***4,500***	***$31.50 / TN***	***$141,750.00***
3001	Furnish & Place Underlayer Stone - 1st 4,500 Tons			$141,750.00
				$141,750.00
CLIN 0003AB	***Over 4,500 tons***	***450***	***$31.50 / TN***	***$14,175.00***
3101	Furnish & Place Underlayer Stone - Over 4,500 Tons			$14,175.00
				$14,175.00
CLIN 0004	***Scour Stone:***	***0***	***$0.00 / NA***	***$0.00***

US Army Corps of Engineers

Current Activity Summary

08 Jul 2002

Location Name

Project Name: Repair of North & South Piers, Baloney Harbor, MI
Contract Number: DACW35-02-C-####

Activity Number	Activity Description	QUANTITY	UNIT PRICE	AMOUNT
CLIN 0004	***Scour Stone: (Continued)***	***0***	***$0.00 / NA***	***$0.00***
	No Activities Assigned to this Bid Item.			
CLIN 0004AA	***First 3,500 tons***	***3,500***	***$27.50 / TN***	***$96,250.00***
4001	Furnish & Place Scour Stone - 1st 3,500 Tons			$96,250.00
				$96,250.00
CLIN 0004AB	***Over 3,500 tons***	***600***	***$27.50 / TN***	***$16,500.00***
4101	Furnish & Place Scour Stone - Over 3,500 Tons			$16,500.00
				$16,500.00
CLIN 0005	***Bedding Stone:***	***0***	***$0.00 / NA***	***$0.00***
	No Activities Assigned to this Bid Item.			
CLIN 0005AA	***First 3,000 tons***	***3,000***	***$28.00 / TN***	***$84,000.00***
5001	Furnish & Place Bedding Stone - 1st 3,000 Tons			$84,000.00
				$84,000.00
CLIN 0005AB	***Over 3,000 tons***	***600***	***$28.00 / TN***	***$16,800.00***
5101	Furnish & Place Bedding Stone - Over 3,000 Tons			$16,800.00
				$16,800.00
CLIN 0006	***Armor Stone:***	***0***	***$0.00 / NA***	***$0.00***
	No Activities Assigned to this Bid Item.			
CLIN 0006AA	***First 6,000 tons***	***6,000***	***$34.00 / TN***	***$204,000.00***
6001	Furnish & Place Armor Stone - 1st 6,000 Tons			$204,000.00
				$204,000.00
CLIN 0006AB	***Over 6,000 tons***	***825***	***$34.00 / TN***	***$28,050.00***
6101	Furnish & Place Armor Stone - Over 6,000 Tons			$28,050.00
				$28,050.00

Sum of CLINs	**$4,489,312.18**
Sum of Activities	**$4,489,312.18**
Difference	**$0.00**

INITIAL INSPECTION WORKSHEET

DEFINABLE FEATURE OF WORK : Site Cast Concrete

A. ACTIVITIES INCLUDED UNDER Site Cast Concrete -

ABC Company, Inc

1008A	Furnish Rebar	$135,000.00
1008B	Place Concrete (2000 CY @ $250.00/CY)	$500,000.00
		$635,000.00

B. QUALITY CONTROL REQUIREMENTS -

SUBMITTALS REQUIRED -

00700	1	SF 1413 for Subcontracts		Not submitted
03250	1	Expansion Joint Materials	A	Approved
03307	1	Batching and Mixing Equipment	F	Receipt
03307	2	Conveying and Placement Equipment	F	Receipt
03307	3	Reinforcing Steel (Mat Steel, Bar Steel	A	Approved
03307	4	Concrete Mixture Proportions;	A	Approved
03307	5	Cementitious Material	A	Approved
03307	6	Aggregates	A	Approved
03307	7	Manufacturer's Literature	A	Approved
03307	8	Batching & Mixing Equipment - Redi-Mix	F	Receipt
03307	9	Conveying & Placing Equipment - Redi-Mix	F	Receipt
03307	10	Concrete Mix Proportions - Redi-Mix	A	Approved
03307	11	Cementitious Material - Redi-Mix	A	Approved
03307	12	Aggregates - Redi Mix	A	Approved
03307	13	Manufacturer's Data; AEA - Redi-Mix	A	Approved
03307	14	Manufacturer's Data; WRA - Redi-Mix	A	Approved
05500	2	Welders	F	Receipt
05552	4	Mill Certs - Ladder Grab Rails	A	Approved

QC TESTS -

CT # 00001	Obtain 1 Cylinder for strength testing at 7 days and 2 Cylinders for 28 days. Minimum of one set per day or 1 set per every 150 CY placed. (ASTM C-94) Required strength at 7 Days = 2,800 p.s.i.; 28 Days = 4,000 p.s.i.	Not Performed
CT # 00002	Check Batch slips for water/cement ratio not to exeeced 0.40 by weight	Not Performed
CT # 00003	Check Slump at both mixer and discharge ends: Pumped = 3" - 7" at discharge Maximum of 5" at Mixer if no admixture used Maximum of 7" at mixer if admixture is used 2 checks per shift is minimum required	Not Performed
CT # 00004	2 Air Content tests required per shift. Check approved mix design for maximum and minimum values acceptable.	Not Performed

C. QA/QC PUNCH LIST ITEMS -

INITIAL INSPECTION WORKSHEET

DEFINABLE FEATURE OF WORK : Site Cast Concrete

C. QA/QC PUNCH LIST ITEMS - Cont.

INCLUDE ADDITIONAL COMMENTS ON DAILY REPORT

_____
_____
_____

D. LABOR RATES -

LABOR CLASSIFICATIONS	BASIC RATE	FRINGE BENEFITS	PLUS %	TOTAL WAGE/HR

E. INSPECTION CHECKS -

		IN COMPLIANCE Yes/ No/ NA
1.	Check rebar for proper bar sizes, per approved shop drawings.	___ ___ ___
2.	Check for 3" clearance of rebar from form sides and top surface.	___ ___ ___
3.	Check for proper use of concrete vibrators	___ ___ ___
4.	Check for correct finish elevations.	___ ___ ___
5.	Concrete finish shall meet approval of on-site Government Representative. Make sure all finshers are aware of approved finishing method and degree of brooming.	___ ___ ___
6.	Ensure embedded items are not displaced during placement and finishing of the concrete.	___ ___ ___
7.	_____	___ ___ ___
8.	_____	___ ___ ___
9.	_____	___ ___ ___
10.	_____	___ ___ ___

F. JOB SITE SAFETY -

		IN COMPLIANCE Yes/ No/ NA
1.	All employees working over water are required to wear workvests (PFDs)	___ ___ ___
2.	All employees are to wear hard hats.	___ ___ ___
3.	Concrete Pump must be shut down prior to cleaning.	___ ___ ___
4.	Review Activity Hazard Analysis for Concrete Work prior to performing this work.	___ ___ ___
5.	_____	___ ___ ___
6.	_____	___ ___ ___
7.	_____	___ ___ ___
8.	_____	___ ___ ___

G. QA Evaluation Notes -

		DISCUSSED Yes/ No/ NA
1.	_____	___ ___ ___
2.	_____	___ ___ ___
3.	_____	___ ___ ___
4.	_____	___ ___ ___

PREPARATORY INSPECTION WORKSHEET

DEFINABLE FEATURE OF WORK : Site Cast Concrete

A. ACTIVITIES INCLUDED UNDER Site Cast Concrete -

ABC Company, Inc.

1008A	Furnish Rebar	$135,000.00
1008B	Place Concrete (2000 CY @ $250.00/CY)	$500,000.00
		$635,000.00

B. QUALITY CONTROL REQUIREMENTS -

SUBMITTALS REQUIRED -

00700	1	SF 1413 for Subcontracts		Not submitted
03250	1	Expansion Joint Materials	A	Approved
03307	1	Batching and Mixing Equipment	F	Receipt
03307	2	Conveying and Placement Equipment	F	Receipt
03307	3	Reinforcing Steel (Mat Steel, Bar Steel	A	Approved
03307	4	Concrete Mixture Proportions;	A	Approved
03307	5	Cementitious Material	A	Approved
03307	6	Aggregates	A	Approved
03307	7	Manufacturer's Literature	A	Approved
03307	8	Batching & Mixing Equipment - Redi-Mix	F	Receipt
03307	9	Conveying & Placing Equipment - Redi-Mix	F	Receipt
03307	10	Concrete Mix Proportions - Redi-Mix	A	Approved
03307	11	Cementitious Material - Redi-Mix	A	Approved
03307	12	Aggregates - Redi Mix	A	Approved
03307	13	Manufacturer's Data; AEA - Redi-Mix	A	Approved
03307	14	Manufacturer's Data; WRA - Redi-Mix	A	Approved
05500	2	Welders	F	Receipt
05552	4	Mill Certs - Ladder Grab Rails	A	Approved

C. QA/QC PUNCH LIST ITEMS -

INCLUDE ADDITIONAL COMMENTS ON DAILY REPORT

D. LABOR RATES -

LABOR CLASSIFICATIONS	BASIC RATE	FRINGE BENEFITS	PLUS %	TOTAL WAGE/HR

PREPARATORY INSPECTION WORKSHEET

DEFINABLE FEATURE OF WORK : Site Cast Concrete

E. REVIEW CONTRACT DRAWINGS AND SPECIFICATIONS -

DRAWING / SPEC. NO	COMMENTS / CONFLICTS

		DISCUSSED Yes/ No/ NA
1.		___ ___ ___
2.		___ ___ ___
3.		___ ___ ___
4.		___ ___ ___

F. REPETITIVE DEFICIENCIES FOUND ON PREVIOUS PROJECTS -

		DISCUSSED Yes/ No/ NA
1.		___ ___ ___
2.		___ ___ ___
3.		___ ___ ___
4.		___ ___ ___

G. INSPECTION CHECKS -

		IN COMPLIANCE Yes/ No/ NA
1.		___ ___ ___
2.		___ ___ ___
3.		___ ___ ___
4.		___ ___ ___

H. JOB SITE SAFETY -

		IN COMPLIANCE Yes/ No/ NA
1.		___ ___ ___
2.		___ ___ ___
3.		___ ___ ___
4.		___ ___ ___

I. QUALITY ASSURANCE EVALUATION NOTES -

		DISCUSSED Yes/ No/ NA
1.		___ ___ ___
2.		___ ___ ___
3.		___ ___ ___
4.		___ ___ ___

CONTRACTORS QUALITY CONTROL REPORT (QCR)
DAILY LOG OF CONSTRUCTION - CIVIL

REPORT NUMBER 92

DATE 22 Jun 2001 - Friday

PROJECT North & South Pier Repair, Baloney Harbor, MI

CONTRACT NUMBER DACW35-02-C-#### NA

CONTRACTOR ABC Company, Inc. 555 Imagination Road, Fantasy, MI 49494

WEATHER
Weather Caused No Delay
Temperature Min 80 °F, Max 63 °F; 0.01 IN Precipitation; 10 MPH Wind

QC NARRATIVES

Activities in Progress:

Set and drove 24 sheets of SSP

Installing Miscellaneous Steel Waler sections c/s 4+00W to 4+50W

123 Tons of Fill stone placed between existing structure and req'd SSP wall from c/s 6+25 W to 6+75W.

Safety Inspection / Safety Meetings:

Weekly Safety Meeting held today - Use of PPE - Hrad hats & Work Vests

PREP/INITIAL DATES (Preparatory and initial dates held and advance notice)

A preparatory inspection was held today for the following feature:

Miscellaneous Steel & Handrail

An initial inspection was held today for the following feature:

Miscellaneous Steel & Handrail

ACTIVITY START/FINISH

The following activity was started today:

Activity No	Description
2001	Furnish & Place Fill Stone - 1st 18,000 Tons

No activities were finished today

QC REQUIREMENTS

The following 4 QC requirements were completed today:

Requirement No	Type	Description	Results
CT-00001	QC Testing	Check Plumbness of piles during driving	Completed
CT-00002	QC Testing	Check horizontal placement of piling (Check for Pile-Walk)	Completed
CT-00003	QC Testing	Check vibratory hammer driving rate for SSP - 12"/minute is the minimum rate. If exceeded, switch to Impact hammer.	Completed
CT-00004	QC Testing	Video Tape Interlocks of piling after driving SSP	Completed

QA/QC PUNCH LIST (Describe QC Punch List items issued, Report QC and QA Punch List items corrected)

The following QC Punch List item was issued today:

Item No	Location	Description
QC-00001	4+25W	Cut-off sheets to finish grade from 4+00W to 4+50W

No Punch List items were corrected today

CONTRACTORS ON SITE (Report first and/or last day contractors were on site)

No contractors had their first or last day on site today

LABOR HOURS

The following labor hours were Reported today:

Employer	Labor Classification	Number of Employees	Hours Worked
	IRONWORKER	3.0	10.0
	PILE DRIVING SETTER	2.0	10.0

ABC Company, Inc.	PILE DRIVER OPERATOR		1.0	10.0
Total hours worked to date: 30.0		Total	6.0	30.0

EQUIPMENT HOURS

The following equipment hours were Reported today:

Equipment ID	Description	Standby Hours	Operating Hours
00000002	Vibratory Hammer	0.0	10.0
00000003	Arc Welder	0.0	8.0
00000004	Crane - 100' Boom	0.0	10.0
Total operating hours to date: 28.0		Total 0.0	28.0

ACCIDENT REPORTING (Describe accidents)

No accidents reported today

CONTRACTOR CERTIFICATION **On behalf of the contractor, I certify that this Report is complete and correct and all equipment and material used and work performed during this Reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.**

QC REPRESENTATIVE'S SIGNATURE	DATE	SUPERINTENDENT'S INITIALS	DATE

TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE (Read instructions on the reverse side prior to initiating this form)	DATE 06/06/2002	TRANSMITTAL NO. 02486-37.2

SECTION I - REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS (This section will be initiated by the contractor)

TO: Grand Haven Area Office 307 South Harbor Street P. O. Box 629 Grand Haven, MI 49417	FROM: ABC Company, Inc 555 Imagination Park Road Fantasy, MI 49494	CONTRACT NO. DACW35-02-C-#### NA	CHECK ONE: ☐ THIS IS A NEW TRANSMITTAL ☒ THIS IS A RESUBMITTAL OF TRANSMITTAL 02486-37.1
SPECIFICATION SEC. NO. (Cover only one section with each transmittal) 02486	PROJECT TITLE AND LOCATION		CHECK ONE: THIS TRANSMITTAL IS FOR ☒ FIO ☐ GOV'T. APPROVAL

ITEM NO. a.	DESCRIPTION OF ITEM SUBMITTED (Type size, model number/etc.) b.	MFG OR CONTR. CAT., CURVE DRAWING OR BROCHURE NO. (See instruction no. 8) c.	NO. OF COPIES d.	CONTRACT REFERENCE DOCUMENT SPEC. PARA. NO. e.	 DRAWING SHEET NO. f.	FOR CONTRACTOR USE CODE g.	VARIATION (See Instruction No. 6) h.	FOR CE USE CODE i.
12	Production Test Results	DATA	3	3.2.3.4				F

REMARKS

I certify that the above submitted items have been reviewed in detail and are correct and in the strict conformance with the contract drawings and specifications except as otherwise stated.

NAME AND SIGNATURE OF CONTRACTOR

SECTION II - APPROVAL ACTION

ENCLOSURES RETURNED (List by item No.)	NAME, TITLE AND SIGNATURE OF APPROVING AUTHORITY	DATE

TRANSMITTAL OF SHOP DRWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE *(Read instructions on the reverse side prior to initiating this form)*	DATE	TRANSMITTAL NO.

SECTION I – REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS *(This section will be initiated by the contractor)*

TO:	FROM:	CONTRACT NO:	CHECK ONE: ☐ THIS IS A NEW TRANSMITTAL ☐ THIS IS A RESUBMITTAL OF TRANSMITTAL_____

SPECIFICATION SEC. NO *(Cover only one section with each transmittal)*	PROJECT TITLE AND LOCATION

ITEM NO. a.	DISCRIPTION OF ITEMS SUBMITTED *(Type size, model number/etc.)* b.	MFG OR CONTR. CAT., CURVE DRAWING OR BROCHURE NO. *(See instruction no. 8)* c.	NO. OF COPIES d.	CONTRACT REFERENCE DOCUMENT SPEC. PARA. NO. e.	 DRAWING SHEET NO. f.	FOR CONTRACTOR USE CODE g.	VARIATION *(see Instruction No. 6)* h.	FOR CE USE CODE i.

REMARKS	I certify that the above submitted items have been reviewed in detail and are correct and in strict conformance with the contract drawings and specifications except as otherwise stated. _____ NAME AND SIGNATURE OF CONTRACTOR

SECTION II – APPROVAL ACTION

ENCLOSURES RETURNED (List by Item No.)	NAME, TITLE, AND SIGNATURE OF APPROVING AUTHORITY	DATE

INSTRUCTIONS

1. Section I will be initiated by the Contractor in the required number of copies.

2. Each transmittal shall be numbered consecutively in the space provided for “Transmittal No.”. This number, in addition to the contract number, will form a serial number for identifying each submittal. For new submittals or resubmittals mark the appropriate box; on resubmittals, insert transmittal number of last submission as well as the new submittal number.

3. The “Item No.” will be the same “Item No.” as indicated on ENG FORM 4288 for each entry on this form.

4. Submittals requiring expeditious handling will be submitted on a separate form.

5. Separate transmittal form will be used for submittals under separate sections of the specifications.

6. A check shall be placed in the “Variation” column when a submittal is not in accordance with the plans and specification -- also, a written statement to that effect shall be included in the space provided for “Remarks”.

7. Form is self-transmittal, letter of transmittal is not required.

8. When a sample of material or Manufacturer’s Certificate of Compliance is transmitted, indicate “Sample” or “Certificate” in column c, Section I.

9. U.S. Army Corps of Engineers approving authority will assign action codes as indicated below in space provided in Section I, column i to each item submitted. In addition they will ensure enclosures are indicated and attached to the form prior to return to the contractor. The Contractor will assign action codes as indicated below in Section I, column g, to each item submitted.

THE FOLLOWING ACTION CODES ARE GIVEN TO ITEMS SUBMITTED

A -- Approved as submitted.

B -- Approved, except as noted on drawings.

C -- Approved, except as noted on drawings
Refer to attached sheet resubmission required.

D -- Will be returned by separate correspondence.

E -- Disapproved (see attached)

F -- Receipt acknowledged

FX -- Receipt acknowledged, does not comply as noted with contract requirements

G -- Other *(Specify)*

10. Approval of items does not relieve the contractor from complying with all the requirements of the contract plans and specifications.

* U.S. Government Printing Office: 1991

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION
Dike Closure, Pte. Mouillee CDF

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAG # RAPH	CLASSIFICATION	GOVT OR A/E REVWR	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		DATE FWD TO APPR AUTH/ DATE RCD FROM CONTR	APPROVING AUTHORITY				MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
							SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION		DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		
(a)	(b)	(c)	(d)	(e)	(f)		(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		01100	SD-01 Preconstruction Submittals															
			Accident Prevention Plan	1.6.1														
			Payrolls and Basic Records	1.6.2														
			Progress Chart	1.6.3	G	AOF												
			Non-listed, Non-Commercially	2.1.1	G	ECD												
			Active Stone or Material Source															
			Survey Note Format	1.4.8.2	G	AOF												
			Video Cassettes		G	AOF												
			SD-07 Certificates															
			As-Built Technician's	2.2														
			Qualifications															
			As-built Drawings	2.2	G	AOF												
			Survey Information	1.4.8.2														
		01101	SD-01 Preconstruction Submittals															
			Additional Property Agreements	1.2.2	G	RED												
		01130	SD-01 Preconstruction Submittals															
			Environmental Protection Plan		G	AOF												
		01330	SD-01 Preconstruction Submittals															
			Submittal register	1.5.1	G	AOF												
		01440	SD-01 Preconstruction Submittals															
			Quality Control Plan															
			GA-AOF															
			Geotextile															
			FIO															
			Geotextile															
			FIO															

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION
Dike Closure, Pte. Mouillee CDF

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAG # RAPH	CLASSIFICATION	GOVT OR A/E REVWR	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		DATE FWD TO APPR AUTH/ DATE RCD FROM CONTR	APPROVING AUTHORITY				MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
							SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION		DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		
(a)	(b)	(c)	(d)	(e)	(f)		(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		02486	SD-01 Preconstruction Submittals															
			Equipment Data															
			Stone Source		G	AOF												
			Alternate Stone Source Data		G	AOF												
			Stone Production Testing Plan		G	AOF												
			SD-07 Certificates															
			Weigh Scale Certification		G	AOF												
			Certified Weight Scale Tickets															
			SD-06 Test Reports															
			Specific Gravity of Stone															
			Check Survey Data															

STATION RECOVERY

PROJECT	Pte. Mouilee	COUNTY Monroe	STATE Michigan
NAME	M-17	STAMPINGS M17 82	AGENCY C of E
TYPE	Alum disc w/magnet	CONDITION Good	

DESCRIPTION

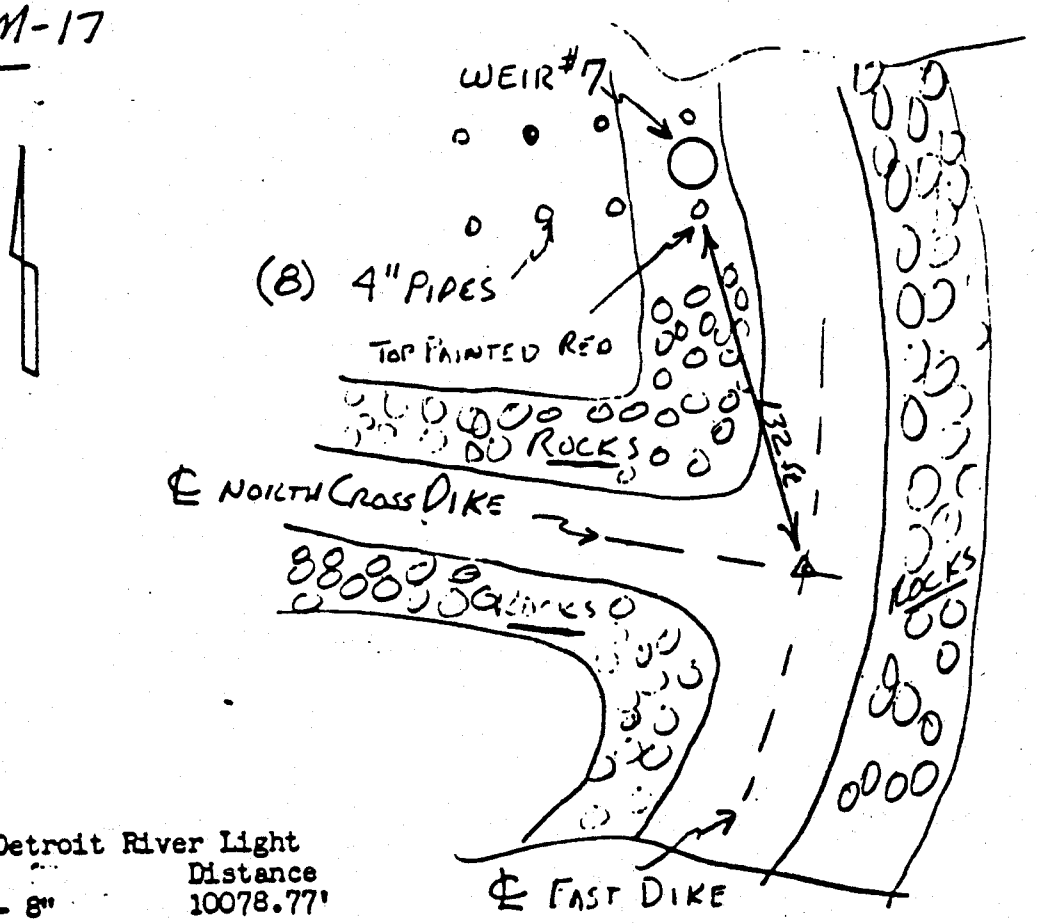
Sta M-17 is set 6 inches below grade at the intersection of the centerlines of the east dike and the north cross dike. This station is approx. 132 feet southwest from weir #7.

Sta M-17 to sta	azimuth	distance
M-16	333°-15'-28"	4908.72'
M-18 M-15	218-02-22 295-11-19	767.32

LAMBERT, SOUTH ZONE, NAD 83

BY	Fred Champine	HORIZONTAL DATA	VERTICAL DATA
DATE	Mar 1982	EASTING X-13447604.43	IGLD
OFFICE	O&M Sec. DPO	NORTHING Y-189806.92	~~USC&GS~~

STA M-17



? to Detroit River Light

Azimuth	Distance
119°-15'- 8"	10078.77'

STATION RECOVERY

OJECT Pte Mouillee	COUNTY Monroe	STATE Michigan
.E M-20	STAMPINGS M20 82	AGENCY C of E
TYPE Alum. disc w/magnet	CONDITION Good	

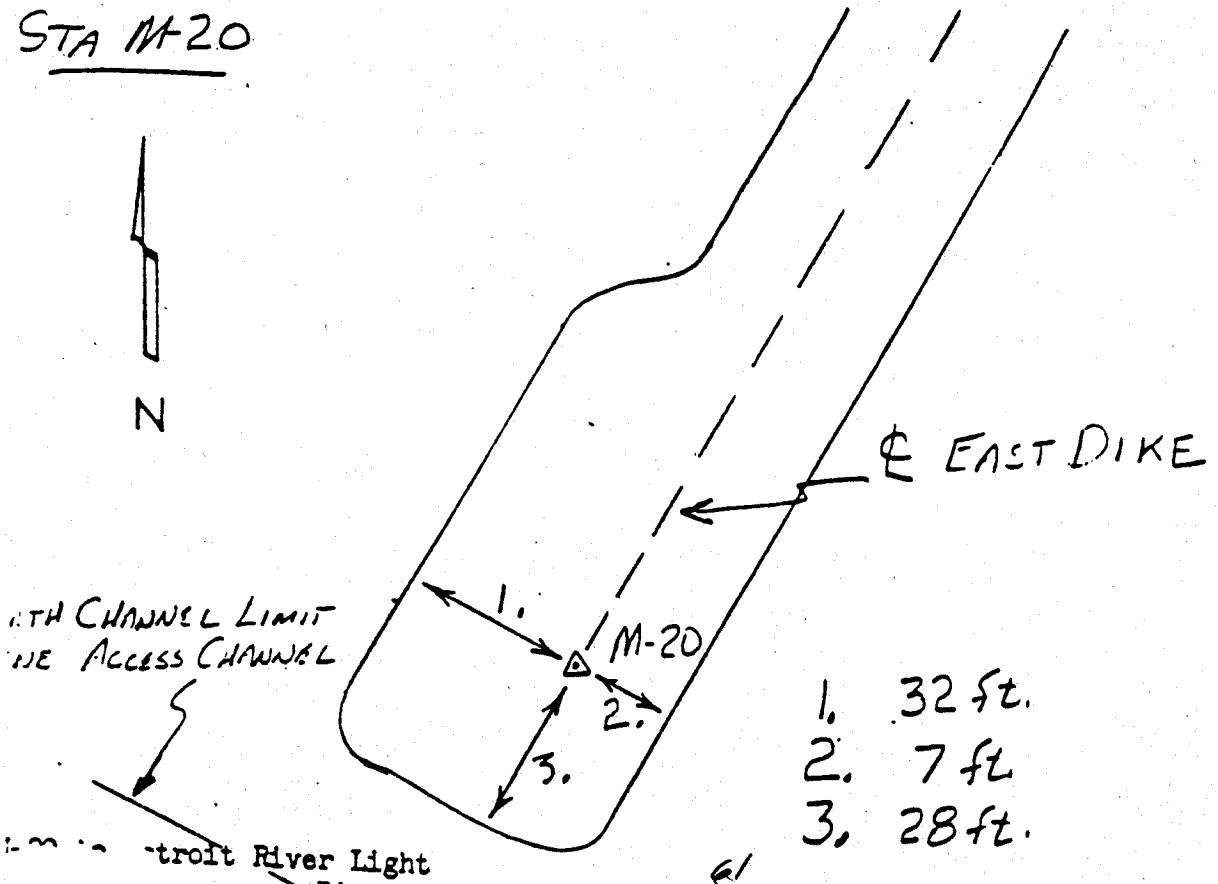
DESCRIPTION

M-20 is located near the access channel opening in the east dike. It is near the southeasterly corner of the turnaround area just north of the access channel. It is set 3 inches below existing grade, 7 feet inside east edge of top of dike, 28 feet inside south edge of top of dike, and 32 feet inside west edge of top of dike.

M-20 to sta	azimuth	distance
M-19	41-23-29	891.87
M-4	221-42-33	683.01

BY Fred Champine	HORIZONTAL DATA	VERTICAL DATA
DATE Mar 1982	EASTING X=13446060.40	IGLD
OFFICE O&M Sec. DRO	NORTHING Y=187955.99	USC&GS

STA M-20



1. 32 ft.
2. 7 ft.
3. 28 ft.

NINTH DISTRICT LOCAL NOTICE TO MARINERS
GENERAL NOTICE ENTRY FORM

1. NAME OF COMPANY:_____

2. TYPE OF OPERATION:_____

3. LOCATION:_____

4. COMMENCE DATE: _____ COMPLETE DATE: _____

5. HOURS OF OPERATION:_____ TO:_____

6. DAYS OF OPERATION:_____ TO:_____

7. NAME OF CONTACT VESSEL:_____

8. VHF - FM CHANNELS MONITORED:_____

9. SPECIAL REQUIREMENTS/REMARKS:_____

_____

_____

10. FOR FURTHER INFORMATION CONTACT:_____

11. TELEPHONE #: _____

12. SIGNATURE:_____ DATE:_____

" NOTE "

TEMPORARY MOORING BUOYS ARE REQUIRED TO BE WHITE WITH A BLUE HORIZONTAL BAND AROUND THE CIRCUMFERENCE OF THE BUOY AND THE WATER LINE. FOR MORE DETAILS CONCERNING REGULATIONS OF MOORING BUOYS REFER TO 33 CODE OF FEDERAL REGULATION PART 66.10-45. A COLOR DEPICTION OF A MOORING BUOY CAN BE FOUND I THE LIGHT LIST VOL. VII GREAT LAKES 1989 (PLATE 4).

General Decision Number **IL030018**

Superseded General Decision No. IL020018

State: Illinois

Construction Type:

DREDGING

MARINE

County(ies):

STATEWIDE

ILLINOIS, INDIANA, **MICHIGAN,** MINNESOTA, NEW YORK, OHIO,

PENNSYLVANIA AND WISCONSIN

DREDGING AND MARINE CONSTRUCTION

Dredging and Marine Construction Projects: floating/land equipment engaged in clamshell, backhoe and dragline dredging, marine construction, bridges,salvage operations and cranes, loaders, dozers, or other equipment used for disposal of dredge spoils or marine construction materials on land at the slip or dock, at the project site, where the above material/spoils is being handled, and all equipment utilized on breakwall/breakwate structures on the Great Lakes, Islands therein, their connecting and tributary waters, including the Illinois Waterway to the Loc at Lockport, Illinois, the New York State Barge Canal System between Tonawanda, New York and Waterford, New York and Oswego, New York, the Duluth-Superior area to the Fond du Lac Bridge Crossing (Minnesota State Highway 23) on the St. Louis River and on the St. Lawrence River eastward to the International Boundary near St. Regis, New York.

Modification Number	Publication Date
0	06/13/2003

COUNTY(ies):

STATEWIDE

SUIL2001A 01/01/2003

	Rates	Fringes
MECHANICAL DREDGING (CLAMSHELL, DRAGLINE, AND BACKHOE) AND MARINE CONSTRUCTION):		
FLOATING EQUIPMENT:		
Indiana:		
Class I	34.60	11.55+b&c

Class II	33.10	11.55+b&c
Class III	29.45	11.55+b&c
Class IV	24.50	11.55+b&c
Illinois:		
Class I	38.35	11.55+b&c
Class II	36.85	11.55+b&c
Class III	32.80	11.55+b&c
Class IV	27.30	11.55+b+c
Michigan:		
Class I	26.75	14.58+b&c
Class II	25.25	14.58+b&c
Class III	22.50	14.58+b&c
Class IV	18.70	14.58+b&c
Minnesota:		
Class I	31.75	8.45+b&c
Class II	30.25	8.45+b&c
Class III	26.95	8.45+b&c
Class IV	22.40	8.45+b&c
New York:		
(Cattaraugus, Chautauga,		
Erie and Orleans Counties):		
Class I	26.96	13.56+b&c
Class II	25.46	13.56+b&c
Class III	22.66	13.56+b&c
Class IV	18.85	13.56+b&c
(Cayuga, Jefferson, Oswego,		
and St. Lawrence Counties):		
Class I	25.30	8.85+b&c
Class II	23.80	8.85+b&c
Class III	21.20	8.85+b&c
Class IV	17.65	8.85+b&c
(Niagara):		
Class I	24.90	11.90+b&c
Class II	23.40	11.90+b&c
Class III	20.80	11.90+b&c
Class IV	17.30	11.90+b&c
(Monroe and Wayne Counties		

and the City of Rochester):		
Class I	27.50	9.00+b&c
Class II	26.00	9.00+b&c
Class III	23.15	9.00+b&c
Class IV	19.25	9.00+b&c
Ohio:		
(Ashtabula, Cuyahoga, Erie,		
Lake, and Lorain Counties:		
Class I	32.36	7.10+b&c
Class II	30.86	7.10+b&c
Class III	27.47	7.10+b&c
Class IV	22.84	7.10+b&c
(Lucas, Henry, Ottawa,		
Wood and Sandusky		
Counties:		
Class I	30.65	7.10+b&c
Class II	29.15	7.10+b&c
Class III	25.95	7.10+b+c
Class IV	21.58	7.10+b&c
Pennsylvania:		
(Erie County):		
Class I	24.57	8.74+b&c
Class II	23.07	8.74+b&c
Class III	20.67	8.74+b&c
Class IV	17.77	8.74+b&c
Wisconsin:		
Includes all marine/floating type work on projects in the		
Superior/Duluth Harbor, Lake Superior.		
Class I	31.65	12.30+b&c
Class II	30.15	12.30+b&c
Class III	26.85	12.30+b&c
Class IV	22.35	12.30+b&c
HYDRAULIC DREDGING:		
TUG OPERATOR - Vessel Over 800 Horse-		
Power	26.49	7.61+a+b
LAUNCH OPERATOR - Vessel 800 Horse-		
Power Or Less	25.15	7.61+a+b

TUG ENGINEER 26.49 7.61+a+b

TUG WORKERS:

Fireman, Lineman, Oiler,
Deckhand, Tankerman. Scowman, (on/or
with tugboats, launches,
or other self-propelled
boats) 22.51 7.61+a+b

DREDGE WORKERS:

Lead Deckhand 29.68 7.61+a+b

Fireman, Oiler, Deckhand, &
Scowman (with dipper, hydraulic
or other floating equipment engaged in
hydraulic and dipper dredging operations)

Pipeline men, (both afloat & ashore including
loading, unloading, maintaining, and handling
pipelines for hydraulic dredges and sandboats)

Rangeman, Tankerman, Sweepman and service

Truck Driver 22.51 7.61+a+b

PAID HOLIDAYS (WHERE APPLICABLE):

A- NEW YEAR'S DAY, B- MEMORIAL DAY, C- INDEPENDENCE DAY, D-LABOR DAY, E- THANKSGIVING DAY, F- CHRISTMAS DAY, G- PRESIDENT'S DAY, H- VETERAN'S DAY.

FOOTNOTES:

a. $30.10 per day per employee for mecical

b. Eight paid holidays: A thru H

c. Hazardous/Toxic Waste Material:

*Level A $2.50 per hour

*Level B 2.00 per hour

*Level C 1.00 per hour

*Level D 0.50 per hour

Such wages shall be above the classifications of work
listed under mechanical dredging and Marine construction
of this general wage decision.

*Working with Hazardous Waste at this level as defined by the
U. S. Enviromental Protection Agency.

CLASSIFICATION DESCRIPTIONS

Class I - Master Mechanic - assist and direct Class II, Class

III, and Class IV, diver/wet tender, engineer
(hydraulic dredge)
Class II - Crane/Backhoe Operator and Mechanic/Welder,
assistant engineer(hydraulic dredge), leverman
(hydraulic dredge), diver/tender
Class III - Deck Equipment Operator (Machineryman)
Maintenance of Crane (over 50 ton capacity)
or Backhoe (115,000 pounds or more), ug/launch
operator, Loader/dozer and like equipment on Barge,
breakwater wall, slip/dock, Scow, Deck Machinery,
etc.
Class IV - Deck Equipment Operator(Machineryman/Fireman)
(Four equipment units or more) and Crane Maintenance
50 ton capacity and under or Backhoe weighing 115,000
pounds or less, assistant tug operator.

WELDERS - Receive rate prescribed for craft performing operation
to which welding is incidental.

==========

Unlisted classifications needed for work not included within
the scope of the classifications listed may be added after
award only as provided in the labor standards contract clauses
(29 CFR 5.5(a)(1)(ii)).

In the listing above, the "SU" designation means that rates
listed under that identifier do not reflect collectively
bargained wage and fringe benefit rates. Other designations
indicate unions whose rates have been determined to be
prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can
be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a
position on a wage determination matter
* a conformance (additional classification and rate)

ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION

General Decision Number MI030007

Superseded General Decision No. MI020007

State: **Michigan**

Construction Type:

AIRPORT & BRIDGE

HIGHWAY

SEWER/INCID. TO HWY.

County(ies):

STATEWIDE

AIRPORT **CONSTRUCTION** PROJECTS (does not include buildings);

BRIDGE **CONSTRUCTION** PROJECTS; HIGHWAY **CONSTRUCTION** PROJECTS; SEWER AND WATER LINE **CONSTRUCTION** PROJECTS WHICH

ARE INCIDENTAL TO A HIGHWAY PROJECT

DOES NOT INCLUDE BRIDGE **CONSTRUCTION** IN MUSKEGON OR OTTAWA

COUNTIES.

Modification Number Publication Date

0 06/13/2003

COUNTY(ies):

STATEWIDE

CARP0004F 06/01/1998

	Rates	Fringes
LIVINGSTON COUNTY (Townships of Brighton, Deerfield, Genoa, Hartland, Osceola and Tyrone); MACOMB, **MONROE,** OAKLAND, SANILAC, ST. CLAIR AND WAYNE COUNTIES:		
CARPENTER; PILEDRIVER	22.488	9.526

CARP0004G 06/01/2002

	Rates	Fringes
DOES NOT INCLUDE LIVINGSTON COUNTY (Townships of Brighton, Deerfield, Genoa, Hartland, Osceola and Tyrone); MACOMB, **MONROE,** OAKLAND, SANILAC, ST. CLAIR AND WAYNE COUNTIES:		
CARPENTER; PILEDRIVER	24.83	5.86

FOOTNOTE:

DIVER: to be paid one and one-half (1-1/2) times the regular journeyperson rate.

ELEC0017E 06/01/1998

	Rates	Fringes
HURON COUNTY; INGHAM COUNTY (Townships of Leroy, Locke, Wheatfield, White Oak and Williamson); LAPEER COUNTY; LENAWEE COUNTY (Townships of Clinton and Macon); LIVINGSTON COUNTY (Townships of Brighton, Conway, Genoa, Green Oak, Hamburg, Handy, Hartland, Howell, Iosco, Marion, Oceola and Putnam); MACOMB COUNTY; **MONROE** COUNTY (Townships of Ash, Berlin, Dundee, Exeter, Frenchtown, Ida, London, Milan, **Monroe,** Raisinville and Summerfield); OAKLAND, ST. CLAIR, SANILAC AND TUSCOLA COUNTIES; WASHTENAW COUNTY (Townships of Ann Arbor, Augusta, Bridgewater, Dexter, Freedom, Lima, Lodi, Northfield, Pittsfield, Salem, Saline, Scio, Superior, Webster, York and Ypsilanti); AND WAYNE COUNTY:		
ALL COMMERCIAL WORK EXCEPT LINE **CONSTRUCTION**:		
Commercial technician	22.81	18.5% + 2.80
LINE **CONSTRUCTION**:		
Line technician	29.22	18.5% + 2.80
Cable splicer; Line technician when helio-arc welding	30.42	18.5% + 2.80
Combination equipment operator and ground person	21.68	18.5% + 2.80
Combination driver/ground person	20.48	18.5% + 2.80
Ground person	18.90	18.5% + 2.80

ELEC0876A 06/01/2002

	Rates	Fringes
REMAINDER OF STATE:		
LINE **CONSTRUCTION**:		
Line technician	27.18	21.5% + 2.20
Cable splicer	28.30	21.5% + 2.20
Operator/ground person (digger, tractor and setting rig with tracks or rough terrain vehicle, large bombardier, backhoe over 85 hp, hydraulic crane 10 ton or over)	20.56	21.5% + 2.20

Light equipment operator/ground person/truck driver/ground person (winch, A frame, diggers when used for distribution line truck and used for distribution work, distribution truck driver, 5th wheel type trucks, bucket trucks, ladder trucks and all live boom trucks, all equipment 85 hp or under)	18.06	21.5% + 2.20
Truck driver/ground person (trucks with winch or boom or dump, other than distribution work)	17.21	21.5% + 2.20
Ground person	13.86	21.5% + 2.20

FOOTNOTE:

Operators of 5/8 yard, rated capacity, backhoe or over; and operators of 25 ton, rated capacity, crane or over; and operators of **heavy** duty tension or pulling machinery on 345 KV and above: to receive the journeyman line technician rate of pay.

ENGI0324C 06/01/2002

	Rates	Fringes

ALCONA, ALPENA, ARENAC, BAY, CHEBOYGAN, CLARE, CLINTON, CRAWFORD, GENESEE, GLADWIN, GRATIOT, HURON, INGHAM, IOSCO, ISABELLA, JACKSON, LAPEER, LENAWEE, LIVINGSTON, MACOMB, MIDLAND, **MONROE,** MONTMORENCY, OAKLAND, OGEMAW, OSCODA, OTSEGO, PRESQUE ISLE, ROSCOMMON, SAGINAW, ST. CLAIR, SANILAC, SHIAWASSEE, TUSCOLA, WASHTENAW AND WAYNE COUNTIES:

POWER EQUIPMENT OPERATORS

STEEL ERECTION:

GROUP 1	36.44	11.65
GROUP 2	37.44	11.65
GROUP 3	34.94	11.65
GROUP 4	35.94	11.65
GROUP 5	33.44	11.65
GROUP 6	34.44	11.65
GROUP 7	33.17	11.65

GROUP 8	34.17	11.65
GROUP 9	32.72	11.65
GROUP 10	33.72	11.65
GROUP 11	31.99	11.65
GROUP 12	32.99	11.65
GROUP 13	31.63	11.65
GROUP 14	32.63	11.65
GROUP 15	30.99	11.65
GROUP 16	24.18	11.65
GROUP 17	22.77	11.65

FOOTNOTE:

Paid Holidays:

New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas Day.

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Engineer when operating combination of boom and jib 400' or longer

GROUP 2: Engineer when operating combination of boom and jib 400' or longer on a crane that requires an oiler

GROUP 3: Engineer when operating combination of boom and jib 300' or longer

GROUP 4: Engineer when operating combination of boom and jib 300' or longer on a crane that requires an oiler

GROUP 5: Engineer when operating combination of boom and jib 220' or longer

GROUP 6: Engineer when operating combination of boom and jib 220' or longer on a crane that requires an oiler

GROUP 7: Engineer when operating combination of boom and jib 140' or longer

GROUP 8: Engineer when operating combination of boom and jib 140' or longer on a crane that requires an oiler

GROUP 9: Tower crane & derrick operator (where operator's work station is 50 ft. or more above first sub-level)

GROUP 10: Tower crane & derrick operator (where operator's work station is 50 ft. or more above first sub-level) on a crane that requires an oiler

GROUP 11: Engineer when operating combination of boom and jib

120' or longer

GROUP 12: Engineer when operating combination of boom and jib 120' or longer on a crane that requires an oiler

GROUP 13: Crane operator and job mechanic

GROUP 14: Crane operator on a crane that requires an oiler

GROUP 15: Hoisting operator

GROUP 16: Compressor or welder operator

GROUP 17: Oiler

ENGI0324D 05/01/2002

	Rates	Fringes
POWER EQUIPMENT OPERATORS:		
STEEL ERECTION:		
ALLEGAN, BARRY, BERRIEN, BRANCH, CALHOUN, CASS, EATON, HILLSDALE, IONIA, KALAMAZOO, KENT, LAKE, MANISTEE, MASON, MECOSTA, MONTCALM, MUSKEGON, NEWAYGO, OCEANA, OSCEOLA, OTTAWA, ST. JOSEPH AND VAN BUREN COUNTIES:		
GROUP 1	26.36	11.65
GROUP 2	26.11	11.65
GROUP 3	25.61	11.65
GROUP 4	21.01	11.65
GROUP 5	19.36	11.65
GROUP 6	17.06	11.65
ANTRIM, BENZIE, CHARLEVOIX, EMMET, GRAND TRAVERSE, KALKASKA, LEELANAU, MISSAUKEE AND WEXFORD COUNTIES:		
GROUP 1	26.36	11.65
GROUP 2	26.11	11.65
GROUP 3	25.11	11.65
GROUP 4	20.71	11.65
GROUP 5	19.06	11.65
GROUP 6	16.56	11.65

FOOTNOTES:

Crane operator with main boom and jib 300' or longer: $1.50 additional to the group 1 rate.

Crane operator with main boom and jib 400' or longer: $3.00 additional to the group 1 rate.

PAID HOLIDAYS:

New Year's Day, Decoration Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas Day.

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Crane operator, with main boom & jib 220' or longer

GROUP 2: Crane operator, with main boom & jib 140' or longer; Tower crane; Gantry crane; Whirley derrick

GROUP 3: Regular equipment operator, crane, dozer, loader, hoist, straddle wagon, mechanic

GROUP 4: Air tugger (single drum), material hoist, pump 6" or over

GROUP 5: Air compressor, welder, generators, conveyors

GROUP 6: Oiler and fire tender

ENGI0324E 09/01/2002

	Rates	Fringes
POWER EQUIPMENT OPERATORS:		
UNDERGROUND (includes sewer):		
BAY, GENESEE, HURON, INGHAM, JACKSON, LAPEER, LENAWEE, LIVINGSTON, MACOMB, MIDLAND, **MONROE,** OAKLAND, SAGINAW, SANILAC, SHIAWASSEE, ST. CLAIR, TUSCOLA, WASHTENAW AND WAYNE COUNTIES:		
GROUP 1	26.78	11.65
GROUP 2	23.05	11.65
GROUP 3	22.32	11.65
GROUP 4	21.75	11.65
ALCONA, ALLEGAN, ALPENA, ANTRIM, ARENAC, BARRY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS, CHARLEVOIX, CHEBOYGAN, CLARE, CLINTON, CRAWFORD, EATON, EMMET, GLADWIN, GRAND TRAVERSE, GRATIOT, HILLSDALE, IONIA, IOSCO, ISABELLA, KALAMAZOO, KALKASKA, KENT, LAKE, LEELANAU, MANISTEE, MASON, MECOSTA, MISSAUKEE, MONTCALM, MONTMORENCY, MUSKEGON, NEWAYGO, OCEANA, OGEMAW, OSCEOLA, OSCODA, OTSEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON, ST. JOSEPH, VAN BUREN AND WEXFORD COUNTIES:		
GROUP 1	25.07	11.65
GROUP 2	21.18	11.65
GROUP 3	20.68	11.65
GROUP 4	20.40	11.65

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Backfiller tamper; Backhoe; Batch plant operator (concrete); Clamshell; Concrete paver (2 drums or larger); Conveyor loader (Euclid type); Crane (crawler, truck type or pile driving); Dozer; Dragline; Elevating grader; Endloader; Gradall (and similar type machine); Grader; Mechanic; Power shovel; Roller (asphalt); Scraper (self-propelled or tractor drawn); Side boom tractor (type D-4 or equivalent and larger); Slip form paver; Slope paver; Trencher (over 8 ft. digging capacity); Well drilling rig; Concrete pump with boom operator

GROUP 2: Boom truck (power swing type boom); Crusher; Hoist; Pump (1 or more - 6-in. discharge or larger - gas or diesel-powered or powered by generator of 300 amperes or more - inclusive of generator); Side boom tractor (smaller than type D-4 or equivalent); Sweeper (Wayne type and similar equipment); Tractor (pneu-tired, other than backhoe or front end loader); Trencher (8-ft. digging capacity and smaller)

GROUP 3: Air compressors (600 cfm or larger); Air compressors (2 or more - less than 600 cfm); Boom truck (non-swinging, non-powered type boom); Concrete breaker (self-propelled or truck mounted - includes compressor); Concrete paver (1 drum - l/2 yd. or larger); Elevator (other than passenger); Maintenance person; Pump (2 or more - 4-in. up to 6-in. discharge - gas or diesel powered - excluding submersible pumps); Pumpcrete machine (and similar equipment); Wagon drill (multiple); Welding machine or generator (2 or more - 300 amp. or larger - gas or diesel powered)

GROUP 4: Boiler; Concrete saw (40 hp or over); Curing machine (self-propelled); Farm tractor (with attachment); Finishing machine (concrete); Fire person; Hydraulic pipe pushing machine; Mulching equipment; Oiler; Pumps (2 or more up to 4-in. discharge, if used 3 hours or more a day, gas or diesel powered - excluding submersible pumps); Roller (other than asphalt); Stump remover; Trencher (service); Vibrating compaction equipment, self-propelled (6 ft. wide or over); End dump operator

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ENGI0324F 06/01/2002

	Rates	Fringes
POWER EQUIPMENT OPERATORS:		
AIRPORT, BRIDGE & HIGHWAY **CONSTRUCTION**:		
GENESEE, MACOMB, **MONROE,** OAKLAND,		
WASHTENAW AND WAYNE COUNTIES:		
GROUP 1	25.18	11.60
GROUP 2	19.75	11.60
GROUP 3	19.19	11.60
GROUP 4	19.02	11.60
STATEWIDE (does not include Genesee,		
Macomb, **Monroe,** Oakland, Washtenaw		
and Wayne Counties):		
GROUP 1	25.18	11.60
GROUP 2	19.60	11.60
GROUP 3	19.04	11.60
GROUP 4	18.72	11.60

FOOTNOTE:

Crane premiums:

Swing boom truck operator over 12 tons: $.50 per hour additional.

Hydraulic crane operator 75 tons and under: $.75 per hour additional.

Hydraulic crane operator over 75 tons: $1.00 per hour additional.

Lattice boom crane operator: $1.50 per hour additional.

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Asphalt plant operator; Crane operator (does not include work on bridge **construction** projects when the crane operator is erecting structural components); Dragline operator; Shovel operator; Locomotive operator; Paver operator (5 bags or more); Elevating grader operator; Pile driving operator; Roller operator (asphalt); Blade grader operator; Trenching machine operator (ladder or wheel type); Auto-grader; Slip form paver; Self-propelled or tractor-drawn scraper; Conveyor loader operator (Euclid type); Endloader operator (1 yd. capacity and over); Bulldozer; Hoisting engineer; Tractor operator; Finishing machine

operator (asphalt); Mechanic; Pump operator (6-in. discharge or over, gas, diesel powered or generator of 300 amp. or larger); Shouldering or gravel distributing machine operator (self-propelled); Backhoe (with over 3/8 yd. bucket); Side boom tractor (type D-4 or equivalent or larger); Tube finisher (slip form paving); Gradall (and similar type machine); Asphalt paver (self-propelled); Asphalt planer (self-propelled); Batch plant (concrete-central mix); Slurry machine (asphalt); Concrete pump (3 in. and over); Roto-mill; Swinging boom truck (over 12 ton capacity); Hydro demolisher (water blaster); Farm-type tractor with attached pan

GROUP 2: Screening plant operator; Washing plant operator; Crusher operator; Backhoe (with 3/8 yd. bucket or less); Side boom tractor (smaller than D-4 type or equivalent); Sweeper (Wayne type and similar equipment); Vacuum truck operator; Batch plant (concrete dry batch)

GROUP 3: Air compressor operator (600 cu. ft. per min or more); Air compressor operator (two or more, less than 600 cfm); Wagon drill operator; Concrete breaker; Tractor operator (farm type with attachment)

GROUP 4: Boiler fire tender; Oiler; Fire tender; Trencher (service); Flexplane operator; Cleftplane operator; Grader operator (self-propelled fine-grade or form (concrete)); Finishing machine operator (concrete); Boom or winch hoist truck operator; Endloader operator (under 1 yd. capacity); Roller operator (other than asphalt); Curing equipment operator (self-propelled); Concrete saw operator (40 h.p. or over); Power bin operator; Plant drier operator (asphalt); Vibratory compaction equipment operator (6 ft. wide or over); Guard post driver operator (power driven); All mulching equipment; Stump remover; Concrete pump (under 3-in.); Mesh installer (self-propelled); Tractor operator (farm type); End dump

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ENGI0324G 05/01/2002

	Rates	Fringes

ALGER, BARAGA, CHIPPEWA, DELTA, DICKINSON, GOGEBIC, HOUGHTON, IRON, KEWEENAW, LUCE, MACKINAC MARQUETTE, MENOMINEE, ONTONAGON

AND SCHOOLCRAFT COUNTIES:
POWER EQUIPMENT OPERATORS:
STEEL ERECTION:

Crane operator, main boom & jib 220' or longer	25.09	11.40
Crane operator, main boom & jib 140' or longer	24.84	11.40
Crane operator, main boom & jib 120' or longer	24.59	11.40
Mechanic with truck and tools	25.59	11.40
Regular operator	24.09	11.40
Compressor; forklift; welder	20.84	11.40
Oiler and fire tender	19.54	11.40

ENGI0324H 10/01/2002

	Rates	Fringes
SEWER RELINING:		
POWER EQUIPMENT OPERATORS:		
GROUP 1	24.37	8.41
GROUP 2	22.98	8.41

SEWER RELINING CLASSIFICATIONS

GROUP 1: Operation of audio-visual closed circuit TV system, including remote in-ground cutter and other equipment used in connection with the CCTV system

GROUP 2: Operation of hot water heaters and circulation systems, water jetters and vacuum and mechanical debris removal systems

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ENGI0325J 05/01/2002

	Rates	Fringes
ALGER, BARAGA, CHIPPEWA, DELTA, DICKINSON, GOGEBIC, HOUGHTON, IRON, KEWEENAW, LUCE, MACKINAC, MARQUETTE, MENOMINEE, ONTONAGON AND SCHOOLCRAFT COUNTIES:		
POWER EQUIPMENT OPERATORS:		
UNDERGROUND WORK:		
Crane operator, main boom & jib		

220' or longer	24.69	11.40
Crane operator, main boom & jib		
140' or longer	24.44	11.40
Crane operator, main boom & jib		
120' or longer	24.19	11.40
Mechanic with truck and tools	25.19	11.40
GROUP 1	23.69	11.40
GROUP 2	20.44	11.40
GROUP 3	19.86	11.40
GROUP 4	18.92	11.40

FOOTNOTES:

Swing boom truck operator over 15 tons: $.50 per hour additional.

Hydraulic crane operator 75 tons and under: $.75 per hour additional.

Hydraulic crane operator over 75 tons: $1.00 per hour additional.

Lattice beam crane operator: $1.50 per hour additional.

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

(UNDERGROUND WORK)

GROUP 1: Regular equipment operator, crane, dozer, front end loader, job mechanic, pumpcrete and squeezecrete

GROUP 2: Air track drill, boom truck (non-swing), concrete mixer, fork truck, material hoist and tugger, pump 6" and over, beltcrete, sweeping machine, trencher, winches, well points and freeze systems

GROUP 3: Air compressor, conveyor, concrete saw, farm tractor (without attachments), fork truck, generator, guard post driver, mulching machine, pumps under 6-in., welding machine and grease person

GROUP 4: Oiler, fire tender and heater operator

ENGI0325K 10/01/2002

	Rates	Fringes
POWER EQUIPMENT OPERATORS:		
HAZARDOUS WASTE REMOVAL:		
BAY, GENESEE, HURON, INGHAM,		

JACKSON, LAPEER, LENAWEE, LIVINGSTON, MACOMB, MIDLAND, **MONROE,** OAKLAND, SAGINAW, SANILAC, SHIAWASSEE, ST. CLAIR, TUSCOLA, WASHTENAW AND WAYNE COUNTIES:

LEVEL A:		
GROUP 1	29.28	11.65
GROUP 2	25.55	11.65
Engineer when operating crane with boom and jib or leads 220' or longer	32.23	11.65
Engineer when operating crane with boom and jib or leads 140' or longer	31.93	11.65
Regular crane operator, mechanic, dragline operator, boom truck operator and concrete pump with boom operator	30.25	11.65
LEVELS B AND C:		
GROUP 1	28.33	11.65
GROUP 2	24.60	11.65
Engineer when operating crane with boom and jib or leads 220' or longer	31.28	11.65
Engineer when operating crane with boom and jib or leads 140' or longer	30.98	11.65
Regular crane operator, mechanic, dragline operator, boom truck operator and concrete pump with boom operator	29.30	11.65
LEVEL D:		
GROUP 1	27.03	11.65
GROUP 2	23.30	11.65

Engineer when operating crane with boom and jib or leads 220' or longer	29.98	11.65
Engineer when operating crane with boom and jib or leads 140' or longer	29.68	11.65
Regular crane operator, mechanic, dragline operator, boom truck operator and concrete pump with boom operator	28.00	11.65
LEVEL D WHEN CAPPING LANDFILL:		
GROUP 1	26.78	11.65
GROUP 2	23.05	11.65
Engineer when operating crane with boom and jib or leads 220' or longer	29.73	11.65
Engineer when operating crane with boom and jib or leads 140' or longer	29.43	11.65
Regular crane operator, mechanic, dragline operator, boom truck operator and concrete pump with boom operator	27.76	11.65
REMAINDER OF STATE:		
LEVEL A:		
GROUP 1	27.57	11.65
GROUP 2	23.67	11.65
Engineer when operating crane with boom and jib or leads 220' or longer	30.52	11.65
Engineer when operating crane with boom and jib or leads 140' or longer	30.22	11.65
Regular crane operator, mechanic, dragline operator,		

boom truck operator and concrete pump with boom operator	28.54	11.65
LEVELS B AND C:		
GROUP 1	26.62	11.65
GROUP 2	22.73	11.65
Engineer when operating crane with boom and jib or leads 220' or longer	29.16	11.65
Engineer when operating crane with boom and jib or leads 140' or longer	29.27	11.65
Regular crane operator, mechanic, dragline operator, boom truck operator and concrete pump with boom operator	27.59	11.65
LEVEL D:		
GROUP 1	25.32	11.65
GROUP 2	21.43	11.65
Engineer when operating crane with boom and jib or leads 220' or longer	28.27	11.65
Engineer when operating crane with boom and jib or leads 140' or longer	27.97	11.65
Regular crane operator, mechanic, dragline operator, boom truck operator and concrete pump with boom operator	26.29	11.65
LEVEL D WHEN CAPPING LANDFILL:		
GROUP 1	25.07	11.65
GROUP 2	21.18	11.65
Engineer when operating crane with boom and jib or leads 220' or longer	28.02	11.65

Engineer when operating crane with boom and jib or leads 140' or longer	27.72	11.65
Regular crane operator, mechanic, dragline operator, boom truck operator and concrete pump with boom operator	26.04	11.65

HAZARDOUS WASTE REMOVAL CLASSIFICATIONS

Group 1: Backhoe, batch plant operator, clamshell, concrete breaker when attached to hoe, concrete cleaning decontamination machine operator, concrete pump, concrete paver, crusher, dozer, elevating grader, endloader, farm tractor (90 h.p. and higher), gradall, grader,heavy equipment robotics operator, loader, pug mill, pumpcrete machines, pump trucks, roller, scraper (self-propelled or tractor drawn), side boom tractor, slip form paver, slop paver, trencher, ultra high pressure waterjet cutting tool system, vactors, vacuum blasting machine operator, vertical lifting hoist, vibrating compaction equipment (self-propelled), and well drilling rig

GROUP 2: Air compressor, concrete breaker when not attached to hoe, elevator, end dumps, equipment decontamination operator, farm tractor (less than 90 h.p.), forklift, generator, heater, mulcher, pigs (portable reagent storage tanks), power screens, pumps (water), stationary compressed air plant, sweeper, and welding machine

ENGI0325L 05/01/2002

	Rates	Fringes
POWER EQUIPMENT OPERATORS:		
GAS DISTRIBUTION AND DUCT INSTALLATION WORK:		
MACOMB, **MONROE,** OAKLAND, ST. CLAIR,		
WASHTENAW AND WAYNE COUNTIES:		
GROUP 1	23.30	11.65
GROUP 2	23.17	11.65
GROUP 3	22.04	11.65
GROUP 4	21.47	11.65

STATEWIDE (does not include Macomb,
Monroe, Oakland, St. Clair,
Washtenaw and Wayne Counties):

GROUP 1	22.39	11.65
GROUP 2-A	22.29	11.65
GROUP 2-B	22.07	11.65
GROUP 3	21.29	11.65
GROUP 4	20.79	11.65

SCOPE OF WORK:

The **construction,** installation, treating and reconditioning of pipelines transporting gas vapors within cities, towns, subdivisions, suburban areas, or within private property boundaries, up to and including private meter settings of private industrial, governmental or other premises, more commonly referred to as "distribution work," starting from the first metering station, connection, similar or related facility, of the main or cross country pipeline and including duct installation.

DEFINITION OF GROUPS:

MACOMB, **MONROE,** OAKLAND, ST. CLAIR, WASHTENAW AND WAYNE COUNTIES:

GROUP 1: Backhoe, crane, grader, mechanic, dozer (D-6 equivalent or larger), side boom (D-4 equivalent or larger), trencher, endloader (2 yd. capacity or greater)

GROUP 2: Dozer (less than D-6 equivalent), endloader (under 2 yd. capacity), side boom (under D-4 capacity), backfiller, pumps (1 or 2 of 6-inch discharge or greater), boom truck (with powered boom), tractor (wheel type other than backhoe or front endloader)

GROUP 3: Tamper (self-propelled), boom truck (with non-powered boom), concrete saw (20 hp or larger), pumps (2 to 4 under 6-inch discharge), compressor (2 or more or when one is used continuously into the second day)

GROUP 4: Oiler, hydraulic pipe pushing machine, grease person

STATEWIDE (does not include Macomb, **Monroe,** Oakland, St. Clair, Washtenaw and Wayne Counties):

GROUP 1: Mechanic, crane (over 1/2 yd. capacity), backhoe (over 1/2 yd. capacity), grader (Caterpillar 12 equivalent or larger)

GROUP 2-A: Trencher, backhoe (1/2 yd. capacity or less)

GROUP 2-B: Crane (1/2 yd. capacity or less), compressor (2 or

more), dozer (D-4 equivalent or larger), endloader (1 yd. capacity or larger), pump (1 or 2 six-inch or larger), side boom (D-4 equivalent or larger)

GROUP 3: Backfiller, boom truck (powered), concrete saw (20 hp or larger), dozer (less than D-4 equivalent), endloader (under 1 yd. capacity), farm tractor (with attachments), pump (2 - 4 under six-inch capacity), side boom, tamper (self-propelled)

GROUP 4: Oiler, grease person

IRON0008H 05/01/2002

	Rates	Fringes
ALGER, BARAGA, CHIPPEWA, DELTA, DICKINSON, GOGEBIC, HOUGHTON, IRON, KEWEENAW, LUCE, MACKINAC MARQUETTE, MENOMINEE, ONTONAGON AND SCHOOLCRAFT COUNTIES:		
IRONWORKERS:		
General contracts $10,000,000 or greater	23.82	12.51
General contracts less than $10,000,000	21.31	12.51

IRON0008L 05/01/2001

	Rates	Fringes
ALGER, BARAGA, CHIPPEWA, DELTA, DICKINSON, GOGEBIC, HOUGHTON, IRON, KEWEENAW, LUCE, MACKINAC MARQUETTE, MENOMINEE, ONTONAGON AND SCHOOLCRAFT COUNTIES:		
IRONWORKERS:		
Pre engineered metal building erection	16.46	7.96

IRON0025B 06/01/2001

	Rates	Fringes
ALCONA, ALPENA, ARENAC, BAY, CHEBOYGAN, CLARE, CLINTON, CRAWFORD, GENESEE, GLADWIN, GRATIOT, HURON, INGHAM, IOSCO, ISABELLA, JACKSON, LAPEER, LIVINGSTON, MACOMB, MIDLAND, MONTMORENCY, OAKLAND, OGEMAW, OSCODA, OTSEGO, PRESQUE ISLE, ROSCOMMON, SAGINAW, SANILAC, SHIAWASSEE, ST. CLAIR, TUSCOLA, WASHTENAW AND WAYNE COUNTIES:		

IRONWORKERS:

Ornamental, structural, precast erector	25.09	17.48
Fence erector	18.37	12.88
Siding & decking	20.56	15.41

IRON0025G 04/01/2001

	Rates	Fringes
IRONWORKER - PRE-ENGINEERED METAL BUILDING ERECTOR:		
GENESEE AND LAPEER COUNTIES; LIVINGSTON COUNTY (east of Burkhardt Rd.); MACOMB, OAKLAND AND ST. CLAIR COUNTIES; WASHTENAW COUNTY (east of US #23); AND WAYNE COUNTY	19.50	13.04
ALCONA, ALLEGAN, ALPENA, ANTRIM, ARENAC, BARRY, BAY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS, CHARLEVOIX, CHEBOYGAN, CLARE, CLINTON, CRAWFORD, EATON, EMMET, GLADWIN, GRAND TRAVERSE, GRATIOT, HILLSDALE, HURON, INGHAM, IONIA, IOSCO, ISABELLA, JACKSON, KALAMAZOO, KALKASKA, KENT, LAKE AND LEELANAU COUNTIES; LIVINGSTON COUNTY (west of Burkhardt Rd.); MANISTEE, MASON, MECOSTA, MIDLAND, MISSAUKEE, MONTCALM, MONTMORENCY, MUSKEGON, NEWAYGO, OCEANA, OGEMAW, OSCEOLA, OSCODA, OTSEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON, SAGINAW, ST. JOSEPH, SANILAC, SHIAWASSEE, TUSCOLA AND VAN BUREN, WASHTENAW COUNTY (west of US #23); AND WEXFORD COUNTY	18.28	12.04

IRON0025Z 06/01/2001

Rates Fringes

ALCONA, ALPENA, ARENAC, BAY, CHEBOYGAN, CLARE, CLINTON, CRAWFORD, GENESEE, GLADWIN, GRATIOT, HURON, INGHAM, IOSCO, ISABELLA, JACKSON, LAPEER, LIVINGSTON, MACOMB, MIDLAND, MONTMORENCY, OAKLAND, OGEMAW, OSCODA, OTSEGO, PRESQUE ISLE, ROSCOMMON, SAGINAW, SANILAC, SHIAWASSEE, ST. CLAIR, TUSCOLA, WASHTENAW AND WAYNE COUNTIES:

IRONWORKERS:

Machinery mover, rigger and machinery erector 22.11 15.48

IRON0026N 06/01/2001

Rates Fringes

ALCONA, ALPENA, ARENAC, BAY, CHEBOYGAN, CLARE, CLINTON, CRAWFORD, GENESEE, GLADWIN, GRATIOT, HURON, INGHAM, IOSCO, ISABELLA, JACKSON, LAPEER, LIVINGSTON, MACOMB, MIDLAND, MONTMORENCY, OAKLAND, OGEMAW, OSCODA, OTSEGO, PRESQUE ISLE, ROSCOMMON, SAGINAW, SANILAC, SHIAWASSEE, ST. CLAIR, TUSCOLA, WASHTENAW AND WAYNE COUNTIES:

IRONWORKERS:

Reinforcing 23.50 15.51

Wire mesh 19.87 14.24

IRON0055E 07/01/2002

Rates Fringes

LENAWEE AND **MONROE** COUNTIES:

IRONWORKERS:

Pre-engineered metal buildings; flat road mesh 19.43 12.41

Fences and guardrails 18.43 12.02

All other work 24.15 12.41

FOOTNOTES:

Work in tunnels and caissons under pressure: $.50 per hour additional.

Work on furnaces, kilns or similar type units with a temperature of 125 degrees F. or over: $1.00 per hour additional.

IRON0292C 06/01/2002

	Rates	Fringes
BERRIEN AND CASS COUNTIES:		
IRONWORKERS:		
Ironworker	21.50	10.56
Cad welder	22.00	10.56

IRON0340A 06/01/2001

	Rates	Fringes
ALLEGAN, ANTRIM, BARRY, BENZIE, BRANCH, CALHOUN, CHARLEVOIX, EATON, EMMET, GRAND TRAVERSE, HILLSDALE, IONIA, KALAMAZOO, KALKASKA, KENT, LAKE, LEELANAU, MANISTEE, MASON, MECOSTA, MISSAUKEE, MONTCALM, MUSKEGON, NEWAYGO, OCEANA, OSCEOLA, OTTAWA, ST. JOSEPH, VAN BUREN AND WEXFORD COUNTIES:		
IRONWORKERS:		
Reinforcing and structural	21.00	9.99
Rigger; **Heavy** machinery mover	20.62	8.56

LABO0005H 10/01/2002

	Rates	Fringes
LABORERS:		
HAZARDOUS WASTE ABATEMENT:		
MACOMB AND WAYNE COUNTIES:		
Work performed inside the building and up to and including 5 ft. outside the building:		
Work performed in conjunction with site preparation not requiring the use of personal protective equipment; Also, Level D	22.80	8.71
Levels A, B or C	23.80	8.71
Work performed over 5 ft. outside the building:		
Work performed in conjunction with site preparation not requiring the use of		

personal protective
equipment; Also, Level D 21.20 7.56
Levels A, B or C 22.20 7.56
LIVINGSTON COUNTY (east of M-151 (Oak
Grove Rd.) and north of M-59,
excluding the city of Howell);AND
OAKLAND COUNTY:
Work performed in conjunction
with site preparation not
requiring the use of
personal protective
equipment; Also, Level D 22.80 8.71
Levels A, B or C 23.80 8.71
LIVINGSTON COUNTY (east of M-151 (Oak
Grove Rd.) and south of M-59,
excluding the city of Howell); AND
WASHTENAW COUNTY:
Work performed inside the building
and up to and including 5 ft.
outside the building:
Work performed in conjunction
with site preparation not
requiring the use of
personal protective
equipment; Also, Level D 23.49 7.39
Levels A, B or C 24.49 7.39
Work performed over 5 ft. outside
the building:
Work performed in conjunction
with site preparation not
requiring the use of
personal protective
equipment; Also, Level D 20.77 5.69
Levels A, B or C 21.77 5.69
MONROE COUNTY:
Work performed inside the building
and up to and including 5 ft.

outside the building:		
Work performed in conjunction with site preparation not requiring the use of personal protective equipment; Also, Level D	23.76	7.49
Levels A, B or C	24.76	7.49
Work performed over 5 ft. outside the building line:		
Work performed in conjunction with site preparation not requiring the use of personal protective equipment; Also, Level D	24.76	7.49
Levels A, B or C	25.76	7.49
HILLSDALE, JACKSON AND LENAWEE COUNTIES:		
Work performed inside the building and up to and including 5 ft. outside the building:		
Work performed in conjunction with site preparation not requiring the use of personal protective equipment; Also, Level D	19.89	5.89
Levels A, B or C	20.89	5.89
Work performed over 5 ft. outside the building:		
Work performed in conjunction with site preparation not requiring the use of personal protective equipment; Also, Level D	20.77	5.69
Levels A, B or C	21.77	5.69
SANILAC AND ST. CLAIR COUNTIES:		
Work performed inside the building and up to and including 5 ft. outside the building:		

	Work performed in conjunction with site preparation not requiring the use of personal protective equipment; Also, Level D	23.42	6.59
	Levels A, B or C	24.42	6.59
	Work performed over 5 ft. outside the building:		
	Work performed in conjunction with site preparation not requiring the use of personal protective equipment; Also, Level D	19.21	5.69
	Levels A, B or C	20.21	5.69
	CLINTON, EATON AND INGHAM COUNTIES; IONIA COUNTY (City of Portland); LIVINGSTON COUNTY (west of M-151 (Oak Grove Rd.), including the City of Howell):		
	Work performed in conjunction with site preparation not requiring the use of personal protective equipment; Also, Level D	19.21	5.69
	Levels A, B or C	20.21	5.69
	GENESEE, LAPEER AND SHIAWASSEE COUNTIES:		
	Work performed in conjunction		

with site preparation not requiring the use of personal protective equipment; Also, Level D	19.82	5.69
Levels A, B or C	20.82	5.69
ARENAC, BAY, CLARE, GLADWIN, GRATIOT, HURON, ISABELLA, MIDLAND, OGEMAW, ROSCOMMON, SAGINAW AND TUSCOLA COUNTIES:		
Work performed in conjunction with site preparation not requiring the use of personal protective equipment; Also, Level D	19.61	5.69
Levels A, B or C	20.61	5.69
ALLEGAN, BARRY, BERRIEN, BRANCH, CALHOUN, CASS, IONIA COUNTY (except the city of Portland); KALAMAZOO, KENT, LAKE, MANISTEE, MASON, MECOSTA, MONTCALM, MUSKEGON, NEWAYGO, OCEANA, OSCEOLA, OTTAWA, ST. JOSEPH AND VAN BUREN COUNTIES:		
Work performed in conjunction with site preparation not requiring the use of personal protective equipment; Also, Level D	18.11	5.69
Levels A, B or C	19.11	5.69

ALCONA, ALPENA, ANTRIM, BENZIE,
CHARLEVOIX, CHEBOYGAN, CRAWFORD,
EMMET, GRAND TRAVERSE, IOSCO,
KALKASKA, LEELANAU, MISSAUKEE,
MONTMORENCY, OSCODA, OTSEGO,
PRESQUE ISLE AND WEXFORD COUNTIES:

Work performed in conjunction
with site preparation not
requiring the use of
personal protective
equipment; Also, Level D 17.23 5.69

Levels A, B or C 18.23 5.69

ALGER, BARAGA, CHIPPEWA, DELTA,
DICKINSON, GOGEBIC, HOUGHTON, IRON,
KEWEENAW, LUCE, MACKINAC,
MARQUETTE, MENOMINEE, ONTONAGON AND
SCHOOLCRAFT COUNTIES:

Work performed inside the building
and up to and including 5 ft.
outside the building:

Work performed in conjunction
with site preparation not
requiring the use of
personal protective
equipment; Also, Level D 19.36 6.39

Levels A, B or C 20.36 6.39

Work performed over 5 ft. outside
the building:

Work performed in conjunction

1 with site preparation not
2 requiring the use of
3 personal protective
4 equipment; Also, Level D 18.35 5.69
5
6 Levels A, B or C 19.35 5.69
7 ----------
8
9 LABO0259B 09/01/2002
0
1 Rates Fringes
2 LABORERS:
3 TUNNEL, SHAFT & CAISSON:
4
5 SCOPE OF WORK:
6 Tunnel, shaft and caisson work of every type and description
7 and all operations incidental thereto, including, but not
8 limited to, shafts and tunnels for sewers, water, subways,
9 transportation, diversion, sewerage, caverns, shelters,
0 aquafers, reservoirs, missile silos and steel sheeting for
1 underground **construction**.
2
3 MACOMB, OAKLAND AND WAYNE COUNTIES:
4 GROUP 1 20.75 7.77
5 GROUP 2 20.86 7.77
6 GROUP 3 20.92 7.77
7 GROUP 4 21.10 7.77
8 GROUP 5 21.35 7.77
9 GROUP 6 21.68 7.77
0 GROUP 7 14.96 7.77
1
2 STATEWIDE (does not include
3 Macomb, Oakland and Wayne
4 Counties):
5 GROUP 1 21.12 5.75
6 GROUP 2 21.21 5.75
7 GROUP 3 21.31 5.75

GROUP 4	21.47	5.75
GROUP 5	21.73	5.75
GROUP 6	22.04	5.75
GROUP 7	14.31	5.75

TUNNEL LABORER CLASSIFICATIONS

GROUP 1: Tunnel, shaft and caisson laborer, dump, shanty, hog house tender, testing (on gas)

GROUP 2: Manhole, headwall, catch basin builder, bricklayer tender, mortar machine, material mixer, fence erector and guard rail builder

GROUP 3: Air tool operator (jackhammer, bush hammer and grinder), first bottom, second bottom, cage tender, car pusher, carrier, concrete, concrete form, concrete repair, cement invert laborer, cement finisher, concrete shoveler, conveyor, floor, gasoline and electric tool operator, gunite, grout operator, welder, heading dinky person, inside lock tender, pea gravel operator, pump, outside lock tender, scaffold, top signal person, switch person, track, tugger, utility person, vibrator, winch operator, pipe jacking, wagon drill and air track operator and concrete saw operator (under 40 h.p.)

GROUP 4: Tunnel, shaft and caisson mucker, bracer, liner plate, long haul dinky driver and well point

GROUP 5: Tunnel, shaft and caisson miner, drill runner, key board operator, power knife operator, reinforced steel or mesh (e.g. wire mesh, steel mats, dowel bars, etc.)

GROUP 6: Dynamite and powder

GROUP 7: Restoration laborer, seeding, sodding, planting, cutting, mulching and top soil grading; and the restoration of property such as replacing mailboxes, wood chips, planter

5 boxes, flagstones, etc.

6 ----------

7

8 LABO0334A 09/01/2001

9 Rates Fringes

0 LABORERS:

1 OPEN CUT:

2

3 SCOPE OF WORK:

4 Open cut **construction** work shall be construed to mean work

5 which requires the excavation of earth including industrial,

6 commercial and residential building site excavation and

7 preparation, land balancing, demolition and removal of concrete

8 and underground appurtenances, grading, paving, sewers, utilities

9 and improvements; retention, oxidation, flocculation and

0 irrigation facilities, and also including but not limited to

1 underground piping, conduits, steel sheeting for underground

2 **construction,** and all work incidental thereto, and general

3 excavation. For all areas except the Upper Peninsula, open cut

4 **construction** work shall also be construed to mean waterfront

5 work, piers, docks, seawalls, breakwalls, marinas and all

6 incidental work.

7 Open cut constructon work shall not include any structural

8 modifications, alterations, additions and repairs to buildings,

9 or highway work, including roads, streets, bridge **construction**0 and parking lots or steel erection work and excavation for the

1 building itself and back filling inside of and within 5 ft. of

2 the building and foundations, footings and piers for the

3 building. Open cut **construction** work shall not include any work

4 covered under Tunnel, Shaft and Caisson work.

5

6 MACOMB, OAKLAND AND WAYNE COUNTIES:

7 GROUP 1	20.00	7.47
8 GROUP 2	20.11	7.47
9 GROUP 3	20.16	7.47
0 GROUP 4	20,24	7.47
1 GROUP 5	20.30	7.47

GROUP 6	17.75	7.47
GROUP 7	14.37	7.47

LIVINGSTON COUNTY (east of M-151 (Oak Grove Rd.)); **MONROE** AND WASHTENAW COUNTIES:

GROUP 1	19.85	5.32
GROUP 2	19.96	5.32
GROUP 3	20.08	5.32
GROUP 4	20.15	5.32
GROUP 5	20.30	5.32
GROUP 6	17.60	5.32
GROUP 7	14.24	5.32

CLINTON, EATON, GENESEE, HILLSDALE AND INGHAM COUNTIES; IONIA COUNTY (City of Portland); JACKSON, LAPEER AND LENAWEE COUNTIES; LIVINGSTON COUNTY (west of M-151 (Oak Grove Rd.)); SANILAC, ST. CLAIR AND SHIAWASSEE COUNTIES:

GROUP 1	18.64	5.32
GROUP 2	18.78	5.32
GROUP 3	18.90	5.32
GROUP 4	18.95	5.32
GROUP 5	19.09	5.32
GROUP 6	16.39	5.32
GROUP 7	13.54	5.32

ALCONA, ALLEGAN, ALPENA, ANTRIM, ARENAC, BARRY, BAY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS, CHARLEVOIX, CHEBOYGAN, CLARE, CRAWFORD, EMMET, GLADWIN, GRAND TRAVERSE, GRATIOT AND HURON COUNTIES; IONIA COUNTY (EXCEPT THE CITY OF PORTLAND);

IOSCO, ISABELLA, KALAMAZOO, KALKASKA,
KENT, LAKE,LEELANAU, MANISTEE, MASON,
MECOSTA, MIDLAND, MISSAUKEE, MONTCALM,
MONTMORENCY, MUSKEGON, NEWAYGO, OCEANA,
OGEMAW, OSCEOLA, OSCODA, OSTEGO,
OTTAWA, PRESQUE ISLE, ROSCOMMON,
SAGINAW, ST. JOSEPH, TUSCOLA, VAN BUREN
AND WEXFORD COUNTIES:

GROUP 1	17.55	5.32
GROUP 2	17.68	5.32
GROUP 3	17.79	5.32
GROUP 4	17.86	5.32
GROUP 5	17.98	5.32
GROUP 6	15.20	5.32
GROUP 7	13.54	5.32

ALGER, BARAGA, CHIPPEWA, DELTA,
DICKINSON, GOGEBIC, HOUGHTON, IRON,
KEWEENAW, LUCE, MACKINAC, MARQUETTE,
MENOMINEE, ONTONAGON AND SCHOOLCRAFT
COUNTIES:

GROUP 1	17.78	5.32
GROUP 2	17.92	5.32
GROUP 3	18.05	5.32
GROUP 4	18.10	5.32
GROUP 5	18.15	5.32
GROUP 6	15.53	5.32
GROUP 7	13.64	5.32

OPEN CUT LABORER CLASSIFICATIONS

GROUP 1: **Construction** laborer

GROUP 2: Mortar and material mixer, concrete form person,
signal person, well point person, manhole, headwall and catch
basin builder, guard rail builder, headwall, seawall, breakwall,

6 dock builder and fence erector
7
8 GROUP 3: Air, gasoline and electric tool operator, vibrator
9 operator, driller, pump person, tar kettle operator, bracer,
0 rodder, reinforced steel or mesh person (e.g., wire mesh, steel
1 mats, dowel bars, etc.), welder, pipe jacking and boring person,
2 wagon drill and air track operator and concrete saw operator
3 (under 40 h.p.), windlass and tugger person and directional
4 boring person
5
6 GROUP 4: Trench or excavating grade person
7
8 GROUP 5: Pipe layer (including crock, metal pipe, multi-plate
9 or other conduits)
0
1 GROUP 6: Grouting person, audio-visual television operations
2 and all other operations in connection with closed circuit
3 television inspection, pipe cleaning and pipe relining work
4
5 GROUP 7: Restoration laborer, seeding, sodding, planting,
6 cutting, mulching and top soil grading; and the restoration of
7 property such as replacing mailboxes, wood chips, planter boxes,
8 flagstones, etc.
9 ----------
0
1 LABO0465A 06/01/2002
2 Rates Fringes
3 LABORERS:
4 (does not include hazardous waste
5 abatement; tunnel, shaft & caisson;
6 or open cut **construction**):
7
8 GENESEE, MACOMB, **MONROE,** OAKLAND,
9 WASHTENAW AND WAYNE COUNTIES:
0 GROUP 1 21.34 5.95
1 GROUP 2 21.47 5.95
2 GROUP 3 21.65 5.95

3	GROUP 4	21.73	5.95
4	GROUP 5	21.94	5.95
5			
6	GROUP 6	22.24	5.95
7			
8	ALLEGAN, BARRY, BAY, BERRIEN, BRANCH,		
9	CALHOUN, CASS, CLINTON, EATON,		
0	GRATIOT, HILLSDALE, HURON, INGHAM,		
1	JACKSON, KALAMAZOO, LAPEER, LENAWEE,		
2	LIVINGSTON, MIDLAND, MUSKEGON,		
3	SAGINAW, SANILAC, SHIAWASSEE, ST.		
4	CLAIR, ST. JOSEPH, TUSCOLA AND VAN		
5	BUREN COUNTIES:		
6	GROUP 1	19.79	5.95
7	GROUP 2	19.99	5.95
8	GROUP 3	20.23	5.95
9	GROUP 4	20.58	5.95
0	GROUP 5	20.45	5.95
1	GROUP 6	20.79	5.95
2			
3	ALCONA, ALGER, ALPENA, ANTRIM,		
4	ARENAC, BARAGA, BENZIE, CHARLEVOIX,		
5	CHEBOYGAN, CHIPPEWA, CLARE,		
6	CRAWFORD, DELTA, DICKINSON, EMMET,		
7	GLADWIN, GOGEBIC, GRAND TRAVERSE,		
8	HOUGHTON, IONIA, IOSCO, IRON,		
9	ISABELLA, KALKASKA, KENT, KEWEENAW,		
0	LAKE, LEELANAU, LUCE, MACKINAC,		
1	MANISTEE, MARQUETTE, MASON, MECOSTA,		
2	MENOMINEE, MISSAUKEE, MONTCALM,		
3	MONTMORENCY, NEWAYGO, OCEANA,		
4	OGEMAW, ONTONAGON, OSCEOLA, OSCODA,		
5	OTSEGO, OTTAWA, PRESQUE ISLE,		
6	ROSCOMMON, SCHOOLCRAFT AND WEXFORD		
7	COUNTIES:		
8	GROUP 1	19.04	5.95
9	GROUP 2	19.25	5.95

GROUP 3	19.54	5.95
GROUP 4	19.98	5.95
GROUP 5	19.60	5.95
GROUP 6	20.03	5.95

LABORER CLASSIFICATIONS

GROUP 1: Asphalt shoveler or loader; asphalt plant misc.; burlap person; yard person; dumper (wagon, truck, etc.); joint filling laborer; miscellaneous laborer; unskilled laborer; sprinkler laborer; form setting laborer; form stripper; pavement reinforcing; handling and placing (e.g., wire mesh, steel mats, dowel bars); mason's tender or bricklayer's tender on manholes; manhole builder; headwalls, etc.; waterproofing,(other than buildings) seal coating and slurry mix, shoring, underpinning; pressure grouting; bridge pin and hanger removal; material recycling laborer; horizontal paver laborer (brick, concrete, clay, stone and asphalt); ground stabilization and modification laborer; grouting; waterblasting; top person; railroad track and trestle laborer

GROUP 2: Mixer operator (less than 5 sacks); air or electric tool operator (jackhammer, etc.); spreader; boxperson (asphalt, stone, gravel); concrete paddler; power chain saw operator; paving batch truck dumper; asphalt screed checker and tunnel mucker (highway work only); concrete saw (under 40 h.p.) and dry pack machine

GROUP 3: Tunnel miner (highway work only); finishers tenders; guard rail builder; highway and median barrier installer; earth retention barrier and wall and M.S.E. wall installer (including sound, retaining and crash barriers); fence erector; bottom person; powder person; wagon drill and air track operator; diamond and core drills; and grade checker

GROUP 4: Asphalt raker

GROUP 5: Pipe layers, oxy-gun

GROUP 6: Line-form setter for curb or pavement

PAIN0022B 06/01/2001

	Rates	Fringes
HILLSDALE, JACKSON AND LENAWEE COUNTIES; LIVINGSTON COUNTY (east of the eastern city limits of Howell, not including the city of Howell, north to the Genesee County line and south to the Washtenaw County line); MACOMB, **MONROE,** OAKLAND, WASHTENAW AND WAYNE COUNTIES:		
PAINTER	22.39	9.75

FOOTNOTES:

For all spray work and journeyman rigging for spray work, also blowing off, $0.80 per hour additional (applies only to workers doing rigging for spray work on off the floor work. Does not include setting up or moving rigging on floor surfaces, nor does it apply to workers engaged in covering up or tending spray equipment.

For all sandblasting and spray work performed on highway bridges, overpasses, tanks or steel, $0.80 per hour additional.

For all brushing, cleaning and other preparatory work (other than spraying or steeplejack work) at scaffold heights of fifty (50) feet from the ground or higher, $0.50 per hour additional.

For all preparatorial work and painting performed on open steel under forty (40) feet when no scaffolding is involved, $0.50 per hour additional.

For all swing stage work - window jacks and window belts - exterior and interior, $0.50 per hour additional.

For all spray work and sandblaster work to a scaffold height of forty (40) feet above the floor level, $0.80 per hour additional.

For all preparatorial work and painting on all highway bridges or overpasses up to forty (40) feet in height, $0.50 per hour

4
5 additional.
6 For all steeplejack work performed where the elevation is forty
7 (40) feet or more, $1.25 per hour additional.
8 ----------
9
0 PAIN0312A 06/01/2002
1 Rates Fringes
2 ALLEGAN COUNTY (does not include the townships of Dorr, Fillmore,
3 Heath, Hopkins, Laketown, Leighton, Manlius, Monterey, Overisel,
4 Salem, Saugatuck and Wayland)); BARRY, BRANCH AND CALHOUN
5 COUNTIES; CASS COUNTY (east of an imaginary line running north
6 and south through the town of Cassopolis); EATON COUNTY
7 (Townships of Bellevue and Olivet); KALAMAZOO AND ST. JOSEPH
8 COUNTIES; VAN BUREN COUNTY (east of an imaginary line
9 running north and south through the town of Lawrence):
0
1 PAINTERS:
2 Brush and roller; sign painting 18.70 8.25
3 Spray and sandblast 19.90 8.25
4 Swing stage, structural steel,
5 steeplejack, boatswain chair
6 and confined space 19.50 8.25
7 Mechanical roller 19.40 8.25
8 ----------
9
0 PAIN0845C 05/10/2001
1 Rates Fringes
2 CLINTON COUNTY; EATON COUNTY (does not include the townships of
3 Bellevue and Olivet); INGHAM COUNTIES; IONIA COUNTY (east of Hwy.
4 M 66); LIVINGSTON COUNTY (west of the eastern city limits of
5 Howell, including the city of Howell, north to the Genesee County
6 line and south to the Washtenaw County line); AND SHIAWASSEE
7 COUNTY (Townships of Bennington, Laingsbury and Perry):
8
9 PAINTER 20.19 4.57
0

FOOTNOTES:

Work on vinyl, spray, blow-off, blast-all blasting including water blasting, lead, all epoxy, and high rate: $.85 per hour additional.

PAIN0845Q 06/01/1998

	Rates	Fringes
MUSKEGON COUNTY; NEWAYGO COUNTY (except the Townships of Barton, Big Prairie, Brooks, Croton, Ensley, Everett, Goodwell, Grant, Home, **Monroe,** Norwich and Wilcox); OCEANA COUNTY; OTTAWA COUNTY (except the townships of Allendale, Blendone, Chester, Georgetown, Holland, Jamestown, Olive, Park, Polkton, Port Sheldon, Tallmadge, Wright and Zeeland):		
PAINTERS:		
Brush and roller	16.95	2.31
Brush (falling distance which exceeds 30')	17.45	2.31
Spray; Sandblasting; Hydroblast (handheld lance 5,000 PSI and over); Power grinders (7" disc or over)	17.70	2.31
Spray (falling distance which exceeds 30'); Sandblasting (falling distance which exceeds 30'); High work (all preparatorial work, sand blasting, and painting from a falling height exceeding 30 ft. on the following named structures: radio towers, exterior cranes but not including work performed from scaffolding or a platform or basket suspended from a crane or hoist)	18.20	2.31

Work performed in confined spaces 18.45 2.31

PAIN0845T 05/11/2000

	Rates	Fringes
ALLEGAN COUNTY (Townships of Dorr, Fillmore, Heath, Hopkins, Laketown, Leighton, Manlius, Monterey, Overisel, Salem, Saugatuck and Wayland); IONIA COUNTY (west of Hwy. M-66); KENT, MECOSTA AND MONTCALM COUNTIES; NEWAYGO COUNTY (Townships of Barton, Big Prairie, Brooks, Croton, Ensley, Everett, Goodwell, Grant, Home, **Monroe,** Norwich and Wilcox); OSCEOLA COUNTY (south of Hwy. #10); OTTAWA COUNTY (Townships of Allendale, Blendone, Chester, Georgetown, Holland, Jamestown, Olive, Park, Polkton, Port Sheldon, Tallmadge, Wright and Zeeland):		
PAINTERS:		
Brush	15.16	5.66
Spray	16.16	5.66
Brush, swing stage; window jacks and belts	15.66	5.66
Spray or sandblast, swing stage; steeplejack	16.66	5.66
Steamclean	16.16	5.66
Waterblast; sandblast	16.91	5.66
Electric substations	16.66	5.66
Bridges over highways and railroads:		
Brush	15.41	5.66
Spray	16.41	5.66
Water - sandblast	16.91	5.66
Interior pipes closed vessels and closed tanks:		
Brush	15.66	5.66

Spray 16.66 5.66

Interior high work:

Brush 16.66 5.66

Spray 17.66 5.66

Fireproofing work 16.16 5.66

FOOTNOTES:

Lead abatement work: $1.00 per hour additional.

PAIN1011D 06/01/2001

	Rates	Fringes
ALGER, BARAGA, CHIPPEWA, DELTA, DICKINSON, GOGEBIC, HOUGHTON, IRON, KEWEENAW, LUCE, MACKINAC, MARQUETTE, MENOMINEE, ONTONAGON AND SCHOOLCRAFT COUNTIES:		
PAINTER	19.40	4.04

FOOTNOTES:

High pay (bridges, overpasses, watertower):

30 to 80 ft.: $.25 per hour additional.

80 ft. and over: $.75 per hour additional.

PAIN1052D 12/01/2002

	Rates	Fringes
GENESEE COUNTY; LAPEER COUNTY (west of Hwy. M-53); AND SHIAWASSEE COUNTY (does not include the townships of Bennington, Laingsbury and Perry):		
PAINTER	20.85	6.57

FOOTNOTES:

Lead abatement work: $1.50 per hour additional.

Application of paint by pressure roller: $.80 per hour

2 additional.

3 Sand blasting, steam cleaning, acid cleaning, and all work

4 ordinarily performed as such: $1.00 per hour additional.

5 Swing stage, boatswain chair, window jacks and all work

6 performed over a falling height of 30 ft.: $.30 per hour

7 additional. For each additional 15 ft. of height: $.10 per hour

8 additional.

9 All industrial spray gun work, pick pullers and those handling

0 needles also for cleaning by blowing off by air pressure: $1.00

1 per hour additional. Commercial spray rate shall be paid only on

2 deck and truss: .30 per hour additional.

3 All work such as steeplejack, tanks, gas holders, stacks, flag

4 poles, radio towers and beacons, power line towers, bridges,

5 etc.: $.65 per hour additional, paid from the ground up.

6

7 Application of paint by use of a mitt: $.35 per hour

8 additional.

9 ----------

0

1 PAIN1396B 05/17/2000

2 Rates Fringes

3 ALLEGAN COUNTY (west of Hwy. M-40 (does not include the townships

4 of Dorr, Fillmore, Heath, Hopkins, Laketown, Leighton, Manlius,

5 Monterey, Overisel, Salem, Saugatuck and Wayland)); BERRIEN

6 COUNTY; CASS COUNTY (west of an imaginary line running north and

7 south through the town of Cassopolis); VAN BUREN COUNTY (west of

8 an imaginary line running north and south through the town of

9 Lawrence):

0

1 PAINTERS:

2 **Heavy** industrial **construction** and

3 nuclear plants:

4 Brush & roller 21.30 4.73

5 Spray; sandblasting; work above

6 30 ft.; bazooka gun; mud box;

7 brush - steel; all work with

8 mitts; all epoxy paint; all

power cleaning equipment; lead
abatement 23.05 4.73

All other work:
Brush & roller 18.30 4.73
Spray; sandblasting; work above
30 ft.; bazooka gun; mud box;
brush - steel; all work with
mitts; all epoxy paint; all
power cleaning equipment; lead
abatement 20.05 4.73

PAIN1474B 06/01/2000

	Rates	Fringes
HURON COUNTY; LAPEER COUNTY (east of Hwy. M-53); ST. CLAIR, SANILAC AND TUSCOLA COUNTIES:		
PAINTER:		
Work on industrial repainting, and bridge projects	19.80	4.65
All other work	22.00	4.65

FOOTNOTES:

Lead abatement work: $1.00 per hour additional.
Work with any hazardous material: $1.00 per hour additional.
Sandblasting, steam cleaning and acid cleaning: $1.00 per hour additional.
Ladder work at or above 40 ft., scaffold work at or above 40 ft., swing stage, boatswain chair, window jacks and all work performed over a falling height of 40 ft.: $1.00 per hour additional.
Spray gun work, pick pullers and those handling needles, blowing off by air pressure, and any person rigging (setting up and moving off the ground): $1.00 per hour additional.
Steeplejack, tanks, gas holders, stacks, flag poles, radio

6 towers and beacons, power line towers, bridges, etc.: $1.00 per
7 hour additional, paid from the ground up.
8 ----------
9
0 PAIN1803C 12/01/2001
1 Rates Fringes
2 ALCONA, ALPENA, ANTRIM, ARENAC, BAY, BENZIE, CHARLEVOIX,
3 CHEBOYGAN, CLARE, CRAWFORD, EMMET, GLADWIN, GRAND TRAVERSE,
4 GRATIOT, IOSCO, ISABELLA, KALKASKA, LAKE, LEELANAU, MANISTEE,
5 MASON, MIDLAND, MISSAUKEE, MONTMORENCY AND OGEMAW COUNTIES;
6 OSCEOLA COUNTY (north of Hwy. #10); OSCODA, OTSEGO, PRESQUE ISLE,
7 ROSCOMMON, SAGINAW AND WEXFORD COUNTIES:
8
9 PAINTERS:
0 Work performed on water, bridges
1 over water or moving traffic,
2 radio and powerline towers,
3 elevated tanks, steeples, smoke
4 stacks over 40 ft. of falling
5 heights, recovery of lead-based
6 paints and any work associated
7 with industrial plants, except
8 maintenance of industrial
9 plants 19.40 7.35
0 All other work, including
1 maintenance of industrial
2 plant 17.98 7.35
3
4 FOOTNOTES:
5 Spray painting, sandblasting, blowdown associated with spraying
6 and blasting, water blasting and work involving a swing stage,
7 boatswain chair or spider: $1.00 per hour additional.
8 All work performed inside tanks, vessels, tank trailers,
9 railroad cars, sewers, smoke stacks, boilers or other spaces
0 having limited egress not including buildings, opentop tanks,
1 pits, etc.: $1.25 per hour additional..
2 ----------

3

4 PLAS0016P 06/01/2001

5 Rates Fringes

6 CEMENT MASON:

7

8 GENESEE, LIVINGSTON, MACOMB, **MONROE,** 9 OAKLAND, SAGINAW, WASHTENAW AND

0 WAYNE COUNTIES 23.79 6.45

1

2 STATEWIDE (does not include Genesee,

3 Livingston, Macomb, **Monroe,** Oakland,

4

5 Saginaw, Washtenaw and Wayne

6 Counties) 22.53 6.45

7 ----------

8

9 PLUM0190D 05/01/2002

0 Rates Fringes

1 PLUMBERS AND PIPEFITTERS:

2 GAS DISTRIBUTION PIPELINE:

3

4 Welding in conjunction with

5 gas distribution pipeline work 25.85 9.67

6

7 All other work:

8 Macomb, Oakland and Wayne

9 Counties 17.74 6.97

0 Remainder of State 16.64 6.97

1 ----------

2

3 SUMI3001A 08/13/1986

4 Rates Fringes

5 FLAG AND SIGNAL PERSON 7.22

6 ----------

7

8 SUMI3002B 05/01/2002

9 Rates Fringes

0 GENESEE, MACOMB, **MONROE,** OAKLAND, WASHTENAW AND WAYNE COUNTIES:
1
2 PAVEMENT MARKER 20.87 5.52
3 LINE PROTECTOR 16.70 5.52
4
5 STATEWIDE (does not include Genesee,
6 Macomb, **Monroe,** Oakland, Washtenaw
7 and Wayne Counties):
8
9 PAVEMENT MARKER 19.32 5.52
0 LINE PROTECTOR 15.46 5.52
1
2 PAVEMENT MARKER AND LINE PROTECTOR CLASSIFICATIONS
3
4 PAVEMENT MARKER:
5 Performs all operations, including use of all tools and
6 equipment for the placement or removal of pavement marking or
7 markers.
8
9 LINE PROTECTOR:
0 Performs all operations for the protection of fresh markings or
1 markers in a striping convoy operation.
2 ----------
3
4 TEAM0007E 06/01/2002
5 Rates Fringes
6 TRUCK DRIVERS:
7
8 GENESEE, LIVINGSTON, MACOMB, **MONROE,** 9 OAKLAND, WASHTENAW AND WAYNE
0 COUNTIES:
1 Trucks under 8 cu. yds. 22.895 .50 + a
2 Trucks, 8 cu. yds. and over 22.995 .50 + a
3 Euclids, double bottomms and
4 lowboys 23.145 .50 + a
5
6 STATEWIDE (does not include Genesee,
7 Livingston, Macomb, **Monroe,** 8 Oakland, Washtenaw and Wayne

9 Counties):
0 Trucks under 8 cu. yds. 22.795 .50 + a
1 Trucks, 8 cu. yds. and over 22.895 .50 + a
2 Euclids, double bottoms and
3 lowboys 23.045 .50 + a
4
5 FOOTNOTE:
6 a. $265.90 per week.
7 ---
8
9 TEAM0247D 06/01/2002
0 Rates Fringes
1 SIGN INSTALLERS:
2
3 GENESEE, MACOMB, **MONROE,** OAKLAND,
4 WASHTENAW AND WAYNE COUNTIES:
5 GROUP 1 21.73 .15 + a
6 GROUP 2 21.48 .15 + a
7
8 STATEWIDE (does not include Genesee,
9 Macomb, **Monroe,** Oakland, Washtenaw
0 and Wayne Counties:
1 GROUP 1 20.18 .15 + a
2 GROUP 2 19.93 .15 + a
3
4 FOOTNOTE:
5 a. $132.70 per week, plus $17.80 per day.
6
7 FOOTNOTE:
8 Contracts of $600,000 or less:
9 Zone 1: $1.20 per hour less than the regular rate.
0 Zone 2: $2.50 per hour less than the regular rate.
1
2 Contracts of $75,000 or less (Zone 2 only): $3.00 per hour less
3 than the regular rate.
4
5 SIGN INSTALLER CLASSIFICATIONS

GROUP 1: performs all necessary labor and uses all tools required to construct and set concrete forms required in the installation of highway and street signs

GROUP 2: performs all miscellaneous labor, uses all hand and power tools, and operates all other equipment, mobile or otherwise, required for the installation of highway and street signs

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	Rates	Fringes
TRUCK DRIVERS:		
UNDERGROUND **CONSTRUCTION**:		
GENESEE, MACOMB, **MONROE,** OAKLAND, ST. CLAIR, WASHTENAW AND WAYNE COUNTIES:		
GROUP 1	20.57	132.70/wk.+34.00/day
GROUP 2	20.71	132.70/wk.+34.00/day
GROUP 3	20.90	132.70/wk.+34.00/day
LAPEER AND SHIAWASSEE COUNTIES:		
GROUP 1	20.47	132.70/wk.+34.00/day
GROUP 2	20.56	132.70/wk.+34.00/day
GROUP 3	20.77	132.70/wk.+34.00/day

PAID HOLIDAYS:

New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas Day.

SCOPE OF WORK:

Excavation, site preparation, land balancing, grading, sewers, utilities and improvements; also including but not limited to, tunnels, underground piping, retention, oxidation, flocculation facilities, conduits, general excavation and steel sheeting for

3 underground **construction**. Underground **construction** work shall
4 not include any structural modifications, alterations, additions
5 and repairs to buildings or highway work, including roads,
6 streets, bridge **construction** and parking lots or steel erection.
7
8 TRUCK DRIVER CLASSIFICATIONS
9
0 GROUP 1: Truck driver on all trucks (EXCEPT dump trucks of 8
1 cubic yards capacity or over, pole trailers, semis, low boys,
2 Euclid, double bottom and fuel trucks)
3
4 GROUP 2: Truck driver on dump trucks of 8 cubic yards capacity
5 or over, pole trailers, semis and fuel trucks
6
7 GROUP 3: Truck driver on low boy, Euclid and double bottom
8 ----------
9
0 WELDERS - Receive rate prescribed for craft performing operation
1 to which welding is incidental.
2 ==========
3
4 Unlisted classifications needed for work not included within
5 the scope of the classifications listed may be added after
6 award only as provided in the labor standards contract clauses
7 (29 CFR 5.5(a)(1)(ii)).
8 ----------
9 In the listing above, the "SU" designation means that rates
0 listed under that identifier do not reflect collectively
1 bargained wage and fringe benefit rates. Other designations
2 indicate unions whose rates have been determined to be
3 prevailing.
4
5 WAGE DETERMINATION APPEALS PROCESS
6
7 1.) Has there been an initial decision in the matter? This can
8 be:
9

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of **Construction** Wage Determinations. Write to:

Branch of **Construction** Wage Determinations
Wage and Hour Division
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment

SECTION TABLE OF CONTENTS

DIVISION 02 - SITE WORK

SECTION 02230

CLEARING AND GRUBBING AND SITE PREPARATION

-- End of Section Table of Contents --

SECTION 02230

CLEARING AND GRUBBING AND SITE PREPARATION

PART 1 GENERAL

1.1 DEFINITIONS

1.1 Clearing

Clearing shall consist of the felling, trimming, and cutting of trees into sections and the satisfactory disposal of the trees and other vegetation designated for removal, including down timber, snags, brush, and rubbish occurring in the areas to be cleared.

1.1.2 Grubbing

Grubbing shall consist of the removal and disposal of stumps, roots larger than 3 inches in diameter, and matted roots from the designated grubbing areas.

1.2 PAYMENT

No separate payment will be made for work covered under this section; all costs associated with this section shall be included in the contract lump sum price in the Bidding Schedule.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 CLEARING

Trees, stumps, roots, brush, and other vegetation in construction areas under this contract shall be cut off flush with or below the original ground surface as directed, except such trees and vegetation as may be indicated or directed to be left standing. Trees and vegetation to be left standing shall be protected from damage incident to clearing, grubbing, and construction operations by the erection of barriers or by such other means as the circumstances require.

3.2 GRUBBING

Material to be grubbed, together with logs and other organic or metallic debris not suitable for foundation purposes, shall be removed to a depth of not less than 36 inches below the original surface level of the ground as directed in borrow areas under this contract.

3.3 SITE PREPARATION

Perform rough grading to provide a smooth ground surface after clearing and grubbing have been completed. Remove unsatisfactory materials from the prepared ground surface.

3.3 DISPOSAL OF MATERIALS

Logs, stumps, roots, brush, rotten wood, and other refuse from the clearing and grubbing operations, shall be disposed of in Cell #2, except when otherwise directed in writing. Such directive will state the conditions covering the disposal of such products and will also state the areas in which they may be placed. Disposal shall conform to the Section ENVIRONMENTAL PROTECTION.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 02 - SITE WORK

SECTION 02315N

EXCAVATION AND FILL

-- End of Section Table of Contents --

SECTION 02315N

EXCAVATION AND FILL

PART 1 GENERAL

1.1 DEFINITIONS

1.1.1 Cohesive Materials

Materials ASTM D 2487 classified as GC, SC, ML, CL, MH, and CH. Materials classified as GM and SM will be identified as cohesive only when the fines have a plasticity index greater than zero.

1.1.2 Cohesionless Materials

Materials ASTM D 2487 classified as GW, GP, SW, and SP. Materials classified as GM and SM will be identified as cohesionless only when the fines have a plasticity index of zero.

1.2 SUBMITTALS

Submit the following in accordance with Section 01330, "Submittal Procedures."

Density tests

1.3 DELIVERY, STORAGE, AND HANDLING

Perform in a manner to prevent contamination or segregation of materials.

1.4 PAYMENT

Payment items for the work of this contract for which contract lump sum payments will be made are listed in the BIDDING SCHEDULE and described below. All costs for items of work, which are not specifically mentioned to be included in a particular lump sum or unit price payment item, shall be included in the listed lump sum item most closely associated with the work involved. The lump sum price and payment made for each item listed shall constitute full compensation for furnishing all plant, labor, materials, and equipment, and performing any associated Contractor quality control, environmental protection, meeting safety requirements, tests and reports, and for performing all work required for which separate payment is not otherwise provided.

PART 2 PRODUCTS

2.1 SOIL MATERIALS

Free of debris, roots, wood, scrap material, vegetation, refuse, soft unsound particles, and [frozen,] deleterious, or objectionable materials.

Unless specified otherwise, the maximum particle diameter shall be one-half the lift thickness at the intended location.

2.1.1 Common Fill

Approved, unclassified soil material with the characteristics required to compact to the soil density specified for the intended location. Soil material from required excavation and borrow area may be used.

2.2 BORROW

Borrow materials required in excess of those furnished from excavations may be obtained from the Government borrow pit. The Government borrow pit is located in Cell #2. If the Government borrow pit is used, the Contractor shall perform clearing, grubbing, and stripping required for providing access to suitable borrow material. Dispose of materials from clearing and grubbing operations is allowed in Cell #2. After removal of borrow material, regrade borrow pit to contours which will blend in with adjacent topography. Maximum side slopes shall be two horizontal to one vertical. Excavation and backfilling of borrow pit shall ensure proper drainage.

PART 3 EXECUTION

3.1 EXCAVATION

Excavate to contours, elevation, and dimensions indicated. Reuse excavated materials that meet the specified requirements for the material type required at the intended location.

3.2 FILLING AND BACKFILLING

Fill and backfill to contours, elevations, and dimensions indicated. Compact each lift before placing overlaying lift.

3.2.1 Common Fill Placement

Place in 3 foot lifts. Compact areas not accessible to rollers or compactors with mechanical hand tampers. Compact to the extent necessary to maintain the required slopes as shown on the drawings. Finish to a smooth surface by blading, rolling with a smooth roller, or both.

3.3 FINISH OPERATIONS

3.3.1 Grading

Finish grades as indicated within one-tenth of one foot. Grade areas to drain water away from structures. For existing grades that will remain but which were disturbed by Contractor's operations, grade as directed.

3.3.2 Protection of Surfaces

Protect newly graded areas from traffic, erosion, and settlements that may occur. Repair or reestablish damaged grades, elevations, or slopes.

3.4 DISPOSITION OF SURPLUS MATERIAL

Place all waste in Government disposal area cell #2 surplus or other soil material not required or suitable for filling or backfilling, such as, brush, refuse, stumps, roots, and timber.

3.5 FIELD QUALITY CONTROL

3.5.1 Check Survey

Surveys made by the Contractor are required on each material placed for determining that the materials are acceptably placed in the work. The Contractor shall make checks as the work progresses to verify lines, grades and thicknesses established for completed work. At least one (1) check survey as specified below shall be made by the Contractor for each twenty-five (25) foot section as soon as practicable after completion. Following placement of each type of material, the cross section of each step of the work shall be approved by the COR before proceeding with the next step of the work. Approval of cross sections based on check surveys shall not constitute final acceptance of the work. Cross sections shall be taken by the Contractor on lines twenty-five (25) feet apart, measured along the construction baseline, with readings at five (5) foot intervals and at breaks along the lines. However, other cross section spacings and reading intervals may be used if determined appropriate by the COR Additional elevations and soundings shall be taken as the COR may deem necessary or advisable. The surveys shall be conducted in the presence of an authorized representative of the Government, unless this requirement is waived by the Contracting Officer. Contractor's check surveys may be used for final quantity surveys, pursuant to, CLAUSE entitled QUANTITY SURVEYS, subject to the approval of the Contracting Officer.

3.6 FINAL EXAMINATION AND ACCEPTANCE

3.6.1 Final Survey

Survey work and measurements required for determination of volume computations for fill materials will be done by the Government. Volume computations will be done by the Government. Cross section surveys will be taken perpendicular to the construction baseline. Elevations and soundings will be taken on lines twenty-five (25) feet apart measuring along the construction baseline, with the readings at ten (10) foot intervals and at breaks in the grade along the line. Other survey intervals and readings may be used if deemed appropriate or advisable by the Contracting Officer. Additional cross sections, elevations and soundings may be taken if determined necessary by the Contracting Officer. Determination of quantities will be made by the Contracting Officer and having once been made, will not be reopened, except on evidence of collusion, fraud or obvious error. Prior to any work under this Section, the Contractor shall coordinate all operations with the Contracting Officer so that volume surveys will be made at the appropriate time. The surveys made under Subparagraph, "Check Surveys" may be used when deemed appropriate by the Contracting Officer, as part of the surveys required herein.

-- End of Section --

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DIVISION 02 - SITE WORK

SECTION 02378

GEOTEXTILES USED AS FILTERS

-- End of Section Table of Contents --

SECTION 02378

GEOTEXTILES USED AS FILTERS

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 123	(1993a) Standard Terminology Relating to Textiles
ASTM D 1683	(1990a) Failure in Sewn Seams of Woven Fabrics
ASTM D 3786	(1987) Hydraulic Bursting Strength of Knitted Goods and Nonwoven Fabrics - Diaphragm Bursting Strength Tester Method
ASTM D 3884	(1992) Abrasion Resistance of Textile Fabrics (Rotary Platform, Double-Head Method)
ASTM D 4355	(1992) Deterioration of Geotextile from Exposure to Ultraviolet light and Water (Xenon-Arc Type Apparatus)
ASTM D 4491	(1992) Water Permeability of Geotextiles By Permittivity
ASTM D 4533	(1991) Trapezoid Tearing Strength of Geotextile
ASTM D 4632	(1991) Grab Breaking Load and Elongation of Geotextiles
ASTM D 4751	(1993) Determining the Apparent Opening Size of a Geotextile
ASTM D 4833	(1988) Index Puncture Resistance of Geotextiles, Geomembranes, and Related Products
ASTM D 4873	(1988) Guide for Identification, Storage, and Handling of Geotextiles

1.2 PAYMENT

No separate payment will be made for work covered under this section; all costs associated with this section shall be included in the contract lump sum price in the Bidding Schedule.

1.3 SUBMITTALS

Government approval is required for all submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with Section SUBMITTAL PROCEDURES:

SD-13 Certificates

Geotextile; FIO.

All brands of geotextile and all seams to be used shall be accepted on the basis of mill certificates or affidavits. The Contractor shall furnish the Contracting Officer, in duplicate, a mill certificate or affidavit signed by a legally authorized official from the company manufacturing the geotextile. The mill certificate or affidavit shall attest that the geotextile meets the chemical, physical and manufacturing requirements stated in this specification.

SD-14 Samples

Geotextile; FIO.

If requested by the Contracting Officer, the Contractor shall provide to the Government geotextile samples for testing to determine compliance with any or all of the requirements in this specification. When samples are to be provided, they shall be submitted a minimum of 60 days prior to the beginning of installation of the same textile. A written certificate of compliance signed by a legally authorized official from the company shall be submitted, in duplicate, upon delivery of the geotextile. The certificate shall state that the geotextile shipped to the site meets the chemical requirements and exceeds the minimum average roll value listed in TABLE 1, MINIMUM PHYSICAL REQUIREMENTS FOR DRAINAGE GEOTEXTILE. Upon request, the contractor shall supply quality control and quality assurance tests for the geotextile. All samples provided shall be from the same production lot as will be supplied for the contract, and shall be the full manufactured width of the geotextile by at least 10 feet long, except that samples for seam strength may be a full width sample folded over and the edges stitched for a length of at least 5 feet. Samples submitted for testing shall be identified by manufacturer's lot designation. For needle punched geotextile, the manufacturer shall certify that the geotextile has been inspected using permanent on-line metal detectors and does not contain any needles.

1.4 SHIPMENT, HANDLING, AND STORAGE

1.4.1 Shipment and Storage

Only approved geotextile rolls, shall be delivered to the project site. All geotextile shall be labeled, shipped, stored, and handled in accordance with ASTM D 4873. No hooks, tongs, or other sharp instruments shall be used for handling geotextile.

PART 2 PRODUCTS

2.1 MATERIALS

2.1.1 Geotextile

2.1.1.1 General

The geotextile shall be a non-woven pervious sheet of plastic yarn as defined by ASTM D 123. The geotextile shall equal or exceed the minimum average roll values listed in TABLE 1, MINIMUM PHYSICAL REQUIREMENTS FOR DRAINAGE GEOTEXTILE. Strength values indicated in the table are for the weaker principal direction.

TABLE 1
MINIMUM PHYSICAL REQUIREMENTS FOR DRAINAGE GEOTEXTILE

PROPERTY	UNITS	ACCEPTABLE VALUES	TEST METHOD
GRAB STRENGTH	lb	120	ASTM D 4632
ABRASION	lb	25	ASTM D 3884
SEAM STRENGTH	lb	108	ASTM D 4632
PUNCTURE	lb	70	ASTM D 4833
BURST STRENGTH	psi	240	ASTM D 3786
TRAPEZOID TEAR	lb	50	ASTM D 4533
PERMEABILITY	cm/sec	0.22	ASTM D 4491
APPARENT OPENING SIZE	U.S. SIEVE	70	ASTM D 4751
PERMITTIVITY	sec -1	1.5	ASTM D 4491
ULTRAVIOLET DEGRADATION	Percent	50 AT 500 Hrs	50 AT 500 Hrs ASTM D 4355

2.1.1.2 Geotextile Fiber

Fibers used in the manufacturing of the geotextile shall consist of a long-chain synthetic polymer composed of at least 85 percent by weight of polyolefins, polyesters, or polamides. Stabilizers and/or inhibitors shall be added to the base polymer if necessary to make the filaments resistant to deterioration caused by ultraviolet light and heat exposure. Reclaimed or recycled fibers or polymer shall not be added to the formulation. Geotextile shall be formed into a network such that the filaments or yarns retain dimensional stability relative to each other, including the edges. The edges of the geotextile shall be finished to prevent the outer fiber from pulling away from the geotextile.

2.1.2 Seams

The seams of the geotextile shall be sewn with thread of a material meeting the chemical requirements given above for geotextile yarn or shall be bonded by cementing or by heat. The sheets of geotextile shall be attached at the factory or another approved location, if necessary, to form sections not less than 18 feet wide. Seams shall be tested in accordance with method ASTM D 1683. The strength of the seam shall be not less than 90

percent of the required grab tensile strength of the unaged geotextile in any principal direction.

2.1.3 Securing Pins

The geotextile shall be secured to the embankment or foundation soil by pins to prevent movement prior to placement of revetment materials. Other appropriate means to prevent movement such as staples, sand bags, and stone could also be used. Securing pins shall be inserted through both strips of overlapped geotextile along the line passing through midpoints of the overlap. Securing pins shall be removed as revetment materials are placed to prevent tearing of geotextile or enlarging holes. The maximum spacing between securing pins depends on the steepness of the embankment slope. The maximum pins spacing shall be equal to or less than the values listed in TABLE 2, MAXIMUM SPACING FOR SECURING PINS. When windy conditions prevail at the construction site, the number of pins should be increased upon the demand of the Contracting Officer. Terminal ends of the geotextile shall be anchored with key trench or apron at crest, toe of the slope and upstream and downstream limits of installation.

TABLE 2
MAXIMUM SPACING FOR SECURING PINS

EMBANKMENT	SPACING, feet
STEEPER THAN 1V ON 3H	2
1V ON 3H TO 1V ON 4H	3
FLATTER THAN 1V ON 4H	5

2.2 INSPECTIONS, VERIFICATIONS, AND TESTING

2.2.1 Manufacturing and Sampling

Geotextiles and factory seams shall meet the requirements specified in TABLE 1, MINIMUM PHYSICAL REQUIREMENTS FOR DRAINAGE GEOTEXTILE. Conformance testing shall be performed in accordance with the manufacturer's approved quality control manual.

2.2.2 Site Verification and Testing

Samples shall be collected at approved locations in accordance with ASTM D 4354, upon delivery to the site, at the request of the Contracting Officer. Samples shall be tested to verify that the geotextile meets the requirements specified in TABLE 1, MINIMUM PHYSICAL REQUIREMENTS FOR DRAINAGE GEOTEXTILE. Samples shall be identified by manufacturer's name, type of geotextile, lot number, roll number, and machine direction. Testing shall be performed at an approved laboratory. Test results from the lot under review shall be submitted and approved prior to deployment of that lot of geotextile. Rolls which are sampled shall be immediately rewrapped in their protective covering.

PART 3 EXECUTION

3.1 SURFACE PREPARATION

The surface on which the geotextile will be placed shall be prepared, to a relatively smooth surface condition, in accordance with the applicable portion of this specification and shall be free from obstruction, debris, depressions, erosion feature, or vegetation. Any irregularities will be removed so as to insure continuous, intimate contact of the geotextile with all the surface. Any loose material, soft or low density pockets of material, will be removed; erosion features such as rills, gullies etc. must be graded out of the surface before geotextile placement.

3.2 INSTALLATION OF THE GEOTEXTILE

3.2.1 General

The geotextile shall be placed in the manner and at the locations shown. At the time of installation, the geotextile shall be rejected if it has defects, rips, holes, flaws, deterioration or damage incurred during manufacture, transportation or storage.

3.2.2 Placement

The geotextile shall be placed with the long dimension parallel to the centerline of the channel and laid smooth and free of tension, stress, folds, wrinkles, or creases. The strips shall be placed to provide a minimum width of 24 inches of overlap for each joint. The Contractor shall adjust the actual length of the geotextile used based on initial installation experience. Temporary pinning of the geotextile to help hold it in place until the bedding layer is placed shall be allowed. The temporary pins shall be removed as the bedding is placed to relieve high tensile stress which may occur during placement of material on the geotextile. Trimming shall be performed in such a manner that the geotextile shall not be damaged in any way.

3.3 PROTECTION

The geotextile shall be protected at all times during construction from contamination by surface runoff and any geotextile so contaminated shall be removed and replaced with uncontaminated geotextile. Any damage to the geotextile during its installation or during placement of granular filter materials and bedding materials shall be replaced by the Contractor at no cost to the Government. The work shall be scheduled so that the covering of the geotextile with a layer of the specified material is accomplished in accordance with the manufacturer's recommendations after placement of the geotextile. Failure to comply shall require replacement of geotextile. The geotextile shall be protected from damage prior to and during the placement of riprap or other materials. This may be accomplished by limiting the height of drop to less than 1 foot, by placing a cushioning layer of sand or gravel on top of the geotextile before placing the material, or other methods deemed necessary. Care should be taken to ensure that the utilized cushioning materials shall not impede the flow of water. Before placement of riprap or other materials, the Contractor shall demonstrate that the placement technique will not cause damage to the geotextile. In no case shall any type of equipment be allowed on the unprotected geotextile.

3.4 PLACEMENT OF CUSHIONING MATERIAL

Placing of cushioning material shall be performed in a manner to insure intimate contact of the geotextile with the prepared surface and with the cushioning material. The placement shall also be performed in a manner that shall not damage the geotextile including tear, puncture, or abrasion. On sloping surfaces the cushioning material shall be placed from the bottom of the slopes upward. During placement, the height of the drop of riprap material shall not be greater than 12 inches. Any geotextile damaged beneath the cushioning material shall be uncovered as necessary and replaced at no cost to the Government.

3.5 OVERLAPPING AND SEAMING

3.5.1 Overlapping

The overlap of geotextile rolls shall be 24 inches. Appropriate measures will be taken to insure required overlap exists after cushion placement.

3.5.2 Sewn Seams

High strength thread should be used such that seam test should conform to ASTM D 1683. The thread shall meet the chemical, ultraviolet, and physical requirements of the geotextile, and the color shall be different from that of the geotextile. The seam strength shall be equal to the strength required for the fabric in the direction across the seam. Overlapping J-type seams are preferable over prayer-type seams as the overlapping fabric reduces the chance of openings to occur at the seam. Double sewing shall be used specially for field seams to provide a safety factor against undetected missed stitches.

-- End of Section --

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DIVISION 02 - SITE WORK

SECTION 02486

STONE CONSTRUCTION

SECTION 02486

STONE CONSTRUCTION

PART 1 GENERAL

1.1 REFERENCES

The following publications of the issues listed below, but referred to thereafter by basic designation only, form a part of this specification to the extent indicated by reference thereto:

CORPS OF ENGINEERS' ROCK TESTING HANDBOOK (RTH)

RTH 107 (1993) Standard Test Method for Specific Gravity and Absorption of Coarse Aggregate

1.2 MATERIAL

1.2.1 Quarry Run Limestone

Quarry Run limestone will be measured for payment by lump sum. Material placed beyond the tolerance limits will not be paid for. The method of determining the quantity of material placed beyond tolerance limits will be made in accordance with Subparagraph, "Determination of Excess Stone." Any material wasted or used by the Contractor for other purposes and any material not placed in the required work in accordance with the requirements of the specifications and drawings will not be measured or paid for.

1.2.2 Riprap

Stone materials will be measured for payment by lump sum. Material placed beyond the tolerance limits will not be paid for. The method of determining the quantity of material placed beyond tolerance limits will be made in accordance with Subparagraph, "Determination of Excess Stone." Any material wasted or used by the Contractor for other purposes and any material not placed in the required work in accordance with the requirements of the specifications and drawings will not be measured or paid for.

1.2.3 Method of Determining Weight with Delivery by Vessel or Barge

1.2.3.1 Gauges

If stone is delivered by vessel or barge, the carrier shall, prior to use in connection with this work, be fitted by the Contractor at its own expense with gauges or such other facilities for determining displacement as may be required by, or be satisfactory to, the Contracting Officer. Carriers which owing to their model or other cause cannot be accurately gauged for displacement shall not be used on this work. Gauges shall be graduated to the tenth of a foot, or to other suitable unit approved by the Contracting Officer. They shall be six (6) in number and shall be located

as follows: two (2) near each end on opposite sides, and two (2) amidship on opposite sides. The gauges shall be attached solidly to the hull its elf, and wherever practicable, shall be located inside the hull. If located inside the hull, provisions shall be made for the free passage of the outside water to a vertical tube and for the ready measurement of the depth of the water within the tube. If located outside on wood hulls, the gauges shall be protected by solid fenders or be recessed into the planking, or if on steel hulls, the gauge marks may be placed directly on the plates and identified by punch marks. Gauges shall be so placed that their zeros are below water when the carrier is in its normal trim, light and free from water. The installation of the gauges shall be subject to the approval of the Contracting Officer. The Contracting Officer shall be notified a minimum of five (5) days prior to installation of gauges.

1.2.3.2 Gauging Tables

To facilitate the determination of the weight of each load, a gauging table for each carrier employed shall be prepared by an accredited agent satisfactory to the Contracting Officer. The gauging table shall show the cargo weight, in tons of 2,000 pounds, for each unit each unit of measurement of the draft. If the lines of the carrier are such that the cubic feet of displacement for each measured unit of draft can be accurately calculated, the gauging table shall be based upon the data, using 62.4 pounds as the weight of one (1) cubic foot of water. If the lines of the carrier to be gauged are such as to render impracticable the preparation of the gauging table by the above described method, the weight for each unit of draft shall be determined by measurement of displacement by actually loading stone of known weight and the weight thus obtained shall be entered in the table for use in subsequent gauging. If alterations are made in any carrier which will affect the accuracy of the gauging table, after it has been prepared, or if otherwise deemed necessary at any time by the Contracting Officer Representative (C.O.R.), the carrier shall be remeasured, and a new gauging table prepared.

1.2.3.3 Reading of Draft Gauges

Readings to determine the draft will be taken before and after unloading, and the difference in tonnage thus found, that is, the difference between displacements loaded and light, will be used to determine the net weight to be paid for. The draft shall be determined from the average of all six (6) readings, weighting the readings of the middle gauges at double those of the end gauges. The Contracting Officer or the designated Contracting Officer's Representative shall be present at all draft gauge readings.

1.2.3.4 Uniform Loading

The carrier shall be so loaded as to cause uniform submergence. The increase in draft on the middle gauges, as a result of the load, shall not differ by more than 0.5 feet from each other, and that between any bow gauges and any stern gauges shall not differ more than 1.5 feet from each other. If such is not the case, the Contractor shall trim the carrier by shifting the stone until this limit is reached, before the stone will be accepted. If, however, the carriers proposed to be used by the Contractor are so built that they cannot be loaded as prescribed, and yet can be calibrated accurately for displacement under varying loads, such other method of determination of displacement as may be approved by the Contracting Officer may be used.

1.2.3.5 Reading in Still Water

All measurements for determining gauging table data and for load depths shall be made in still water as close to the work as is possible. The Contractor is required to place the carriers where such measurements can be accurately made.

1.2.3.6 Leaks

All carriers used in transporting stone shall be free of leaks such as would render accurate gauging difficult. Facilities for inspecting the hold of each carrier to determine whether leakage is occurring shall be provided. Each carrier shall also be provided with adequate pumping facilities, and if water is found to be accumulating in the hold, the carrier shall be pumped dry before each gauging, both before and after unloading.

1.2.3.7 Variations During Unloading Operations

Lightening by pumping or by transfer of crews or supplies will not be permitted while stone is being discharged. Should any lightening become necessary, the unloading of stone shall be suspended and the load marks shall be taken in such manner as to insure the Government against loss from the cause.

1.2.3.8 Carrier Designations

Each carrier shall be plainly marked by a distinctive number, letter, or name, which shall not be changed or given to any other carrier during the contract period.

1.2.3.9 Verification of Measurements

The readings, other data, and calculations from which the gauging table and the tonnage are determined will be open to verification by the Contractor and shall be subject to the approval of the Contracting Officer. The Contractor is invited to be present in person or to be represented by an authorized agent during the measuring of carriers. When the displacements of the carriers are determined or redetermined, a record of allowed displacement for quantity determination will be sent to the Contractor. If the Contractor protests within five (5) days, the carrier will be remeasured and the Contractor must be present in person or be represented by an accredited agent so that correct measurements can be agreed upon. The Contractor will be given the weight of each load as it is determined. Failure to protest within five (5) days will be taken as equivalent to expressing satisfaction with the measurements and weight of stone determined by the Contracting Officer.

1.2.3.10 Carriers Not Measured

In case any stone is delivered by carriers not measured for displacement and marked as herein described, the Contractor shall, at its own expense, furnish means for properly and conveniently weighing such stone at the work site. In case any stone is delivered by carriers not measured for displacement and marked as herein described, the Contractor shall, at its own expense, furnish means for properly and conveniently weighing such stone at the work site.

1.2.4 Method of Determining Weight with Delivery by Truck

The method of measurement for determining the weight of stone materials delivered by truck shall be certified weigh bills provided by the Contractor. Weigh bills and the scales used for weighing of trucks and materials contained therein shall, unless otherwise approved by the Contracting Officer, conform to the following requirements:

a. Scales shall conform to the requirements of the NBS Handbook H 44. The tolerance applications of the Handbook, as applicable to under registration and over registration and to tests involving digital indications or representations, shall apply. A scale shall not be used for weighing a load totaling more than the nominal capacity marked on the scale by the manufacturer. Any portion of the load in excess of the nominal scale capacity will not be considered for payment.

(1) The accuracy of the scale shall be checked. When a State scale inspector is not immediately available for checking the scale, the Contractor may, at its own expense, secure a check from a local official sealer of weights and measures, or the Contracting Officer may give tentative approval, based on check truckloads weighed on other scales which bear an official seal placed in the current calendar year.

b. The total weight of a single highway vehicle shall be weighed as a single draft and shall not be determined by adding together the results obtained by separately weighing each end of such vehicle except that weighing of a coupled combination may be determined without uncoupling under the following conditions:

(1) The brakes are released.

(2) There is no tension or compression on the drawbar.

(3) The approaches are straight and in the same level plane as the scale platform.

(4) The approaches are paved at least fifty (50) feet in each direction with a seal coat or higher type surfacing.

(5) The approaches are of sufficient width and length to ensure level positioning of vehicles during the weighing operation.

c. When a print-out system is employed on a platform or surge bin scale, it shall be equipped with a printer which shall print the following information on a triplicate ticket for each truckload:

(1) Time

(2) Date

(3) Sequential ticket number (may be preprinted on ticket)

(4) Gross Weight

(5) Tare Weight (trucks shall be tare weighed at least twice daily)

(6) Net Weight

(7) Net accumulated job daily total

(8) Truck identification number

d. The system shall be so interlocked as to allow printing only when the scale has come to a complete rest.

1.2.4.1 Scales

For scales not equipped with the print-out system, as stated above, weigh bills shall contain the same or equivalent data as specified for the print-out system. Weigh bills, including print-outs, shall be certified by the signature of the scale operator, which shall attest that the information shown on the weigh bill is correct and is the weight(s) observed on the scale at the time of weighing. Each weigh bill shall also be certified by the Contractor attesting that the entire load was properly placed in the work, and shall show the time and date of weighing and the time and date of unloading. Each truck shall be plainly marked by a distinctive number, letter, or name, which shall not be changed or given to any other truck during the contract period. The Government reserves the right to periodically inspect the weighing operations at the scales.

1.2.4.2 On-Site Scales

On-site scales shall be certified by the applicable local weights and measures regulating agency and shall be as approved by the Contracting Officer. Scales shall be of the recording type and of the size required to weigh the materials and containers or vehicles. The scale shall include a housing for the instruments and scale operator, with heat, lighting and ventilation.

1.2.5 Determination of Excess Stone

All stone outside the limits and tolerances of the cross sections of the structure, except minor variations as determined by the Contracting Officer, will be deducted from the quantity of new stone to be paid for. Weight of excess stone will be determined from the cross sections obtained by the method provided for in Subparagraph, "Final Surveys," on the basis that the cubic feet of volume (including voids) for each type of stone, as listed below, is equal to one (1) ton or 2,000 pounds for a specific gravity of stone furnished equal to 2.65. If the specific gravity of the stone furnished is other than 2.65, the cubic feet of volume equaling 2,000 pounds shall be recomputed. The re computation shall be done by multiplying the indicated volume per ton by the ratio of 2.65 divided by the specific gravity of the stone furnished. Should any excess stone be disclosed above the tolerance line as defined in Subparagraph, "Tolerances," its volume will be computed by the average end area method, based on the cross sections in the following manner. The average end area of excess stone above the tolerance line for two (2) successive cross sections, multiplied by the distance between the cross sections will be accepted as the volume. The Contractor will not be required to remove such excess stone and deductions for the weights thereof will be made from contract payments for new stone. In addition to the above, stone which has been delivered to the site and has been lost or wasted or otherwise not properly incorporated into the final required work, shall be deducted from the quantity to be paid for.

Type of Stone	**Cubic Feet of Volume Per Ton** (for excess quantity calculations)
Riprap	18.65

Quarry Run Limestone 14.26

1.2.6 Final Survey

Survey work and measurements required for determination of excess volume computations for stone materials will be done by the Government. Volume computations will be done by the Government. Cross section surveys will be taken perpendicular to the construction baseline. Elevations and soundings will be taken on lines twenty-five (25) feet apart measuring along the construction baseline, with the readings at ten (10) foot intervals and at breaks in the grade along the line. Other survey intervals and readings may be used if deemed appropriate or advisable by the Contracting Officer. Additional cross sections, elevations and soundings may be taken if determined necessary by the Contracting Officer. Determination of quantities will be made by the Contracting Officer and having once been made, will not be reopened, except on evidence of collusion, fraud or obvious error. Prior to any work under this Section, the Contractor shall coordinate all operations with the Contracting Officer so that excess volume surveys will be made at the appropriate time. The surveys made under Subparagraph, "Check Surveys" may be used when deemed appropriate by the Contracting Officer, as part of the surveys required herein. Stone quantity computations shall be based entirely upon weights of new stone as determined from certified scale weight tickets.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only or as otherwise designated. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittal

Equipment Data

Prior to starting work, a list of all equipment, tools, machines, including their sizes, capacities and operating speeds, to be used in the performance of the work shall be submitted. All the plant shall be maintained in satisfactory working condition at all times.

Stone Source; G-AOF.

The Contractor shall, at least 15 calendar days in advance of using the source, designate in writing the source or one (1) combination of sources from which it proposes to furnish each type of stone materials. The Government shall also at this time be given in writing the specific areas, lifts and geologic units in the quarry or pit to be utilized.

Alternate Stone Source Data; G-AOF.

If a proposed source is disapproved, submit the required data for an alternate listed stone source.

Stone Production Testing Plan; G-AOF.

Prior to starting production of any stone materials, submit in writing the detailed methods of production testing the Contractor plans to follow. The details shall include the Contractor's methods to be used in processing, loading, and handling each test sample.

SD-07 Certificates

Weigh Scale Certification; G-AOF

Prior to the use of a weigh scale, submit details on the location and construction of the scale and a copy of the certification of the scale's accuracy from the local weights and measures regulating agency.

Certified Weight Scale Tickets

A copy of each weigh bill, including certification of exact weight, time of weighing and delivery and certification of proper placement in the work shall be submitted within one (1) work day after weighing.

SD-06 Test Reports

Specific Gravity of Stone

At least fifteen (15) calendar days in advance of shipment of stone to the work site, submit a copy of specific gravity test results for the stone proposed to be furnished. The specific gravity test shall not be more than 90 days old.

Check Survey Data

A copy of the record of each check survey shall be submitted within one (1) work day after the survey.

PART 2 PRODUCTS

2.1 STONE MATERIALS

2.1.1 General

The materials to be furnished shall meet all requirements specified in this Section of the specifications. The Contracting Officer will, at any time during the contract, reject materials not meeting specified requirements at the source or job site. Inspection of materials at the quarry and job site by the Contracting Officer will be as specified in Paragraph, "QUALITY ASSURANCE." Inspection and testing of materials by the Contractor shall be as stated in Paragraph, "QUALITY CONTROL." Materials which have been delivered to the project site and are rejected, whether in stockpile or in place in the structure, shall be removed from the project site at the Contractor's expense.

2.1.2 Sources

2.1.2.1 Listed Stone Material Sources

The following listed sources have been tested and/or have previously furnished materials that meet the quality requirements specified. Information for each of the listed sources is available for inspection and

use by the Contractor in the Office of the Design Branch, Engineering & Construction Division, U.S. Army Corps of Engineers, Detroit District, 477 Michigan Avenue, McNamara Building, Detroit, Michigan. If a listed source is only qualified for certain types of material it is so noted.

(1) Drummond Island Quarry, Drummond Island, Michigan.

(2) Cedarville Quarry of the Michigan Limestone Division of the U.S.X. Corporation, Cedarville, Michigan.

(3) Rogers City Quarry of Michigan Limestone Division of the U.S.X. Corporation, Rogers City, Michigan.(Qualifies for stone up to 1,000 pounds in weight.)

(4) Inland Lime and Stone Quarry, Special Minerals Inc., near Manistique, Michigan.

(5) Marblehead Quarry, Marblehead, Ohio.

(6) Presque Island Quarry of Chemstone Corporation, Presque Isle, (Stoneport), Michigan. (Qualifies for stone up to 1,000 pounds in weight.)

(7) Woodville Lime and Chemical Company Quarry, Woodville, Ohio.

(8) Sherman Quarry, Pelkie, Michigan. (Qualifies for stone up to 3 tons in weight.)

(9) Woolery Quarry, Woolery Stone Company, Bloomington, Indiana.

(10) Reed Quarry, Bloomington Limestone Company, Bloomington, Indiana.

(11) Hunter Valley Quarry, Empire Stone Company, Bloomington, Indiana.

(12) Maple Hill Quarry, Bloomington Limestone Company, Bloomington, Indiana.

(13) University Quarry, Indiana Limestone Company, Bedford, Indiana.

(14) Adams Quarry, Indiana Limestone Company, Bedford, Indiana.

(15) Diehl Hollow Quarry, Indiana Limestone Company, Bedford, Indiana.

(16) Walsh Quarry, Indiana Limestone Company, Bedford, Indiana.

(17) PM & B Quarry, Indiana Limestone Company, Bedford, Indiana.

(18) Chumley Quarry, Empire Stone Company, Bloomington, Indiana.

(19) Victor Oolitic Quarry, Victor Oolitic Stone Company, Bloomington, Indiana.

(20) Valders Quarry, "Middle Level," Valders, Wisconsin.

(21) North Quarry, Kelleys Island, Ohio.

(22) Kelstone Quarry "Lower Level," Lake State Aggregate Company, Kelleys Island, Ohio.

(23) White Rock Quarry, Edward Kraemer and Sons, Inc., Clay Center, Ohio.

(24) Wallace Stone Company Quarry, Bayport, Michigan. (Qualifies for stone up to 1,000 pounds in weight.)

(25) Sturgeon Bay Sand and Gravel Co., Sturgeon Bay, Wisconsin. (Qualifies for stone up to five (5) tons in weight.)

(26) Materials Service Corporation Quarry, Thornton, Illinois. (Qualifies for stone up to 1,000 pounds in weight.)

(27) Maybee Quarry, Stoneco Inc., Maybee, Michigan. (Qualifies for stone up to 1 ton in weight.)

(28) Portage Stone Quarry, Portage (Wood County), Ohio, Stoneco Inc., Maumee, Ohio.

{29) Lime City Stone Company Quarry, Lime City (Perrysburg), Ohio.

(30) North Baltimore Quarry, France Stone Company, North Baltimore, Ohio.

(31) Ottawa Lake Quarry, Stoneco Inc., Ottawa Lake, Michigan. (Qualifies for stone up to 1 ton, shaley material unacceptable.)

(32) Luckey Quarry, France Stone Company, Luckey, Ohio.

(33) Bloomville Quarry, France Stone Company, Bloomville, Ohio.

(34) Bellevue Quarry, France Stone Company, Bellevue, Ohio.

(35) Au Glaize Stone Quarry, Oakwood, Ohio, Stoneco Inc.

(36) Maumee Quarry, Stoneco Inc., Maumee, Ohio.

(37) Silica Quarry, Sylvania, Ohio, of the France Stone Company, Toledo, Ohio.

(38) Ida Quarry, Grape, Michigan, of the France Stone Company, Toledo, Ohio.

(39) Sibley Quarry, Trenton, Michigan, of the Michigan Foundation Company, Trenton, Michigan. (Qualifies for stone up to 2 tons in weight.)

(40) Banat Quarry, Menominee, Michigan. (Qualifies for stone up to 100 pounds in weight.)

(41) Rexton Quarry, Rexton, Michigan, of the Sand Products Corporation, Brevort, Michigan.

(42) Middle Inlet Granite Quarry, Middle Inlet, Wisconsin.

(43) Byran Dresser Trap Rock Quarry, Dresser, Wisconsin.

(44) Scray's Quarry, DePere, Wisconsin. (Qualifies for stone up to 900 pounds in weight.)

(45) Rockwell Lime Company Quarry, Manitowoc, Wisconsin. (Qualifies for stone up to three (3) tons in weight from lower lift only.)

(46) Vulcan Material Company Quarry, McCook, Illinois. (Qualifies for stone up to 1,000 pounds in weight.)

(47) H.B. Hoadley Quarry, Bloomington, Indiana.

(48) Utley Quarry, Fairwater, Wisconsin.

(49) Zimmer Quarry, Kewaunee, Wisconsin. (Qualifies for stone up to 50 pounds in weight.)

(50) Mundt Quarry, Amberg, Wisconsin.

(51) Krygoski Quarry, Krygoski Stone Company, Menominee, Michigan. (Qualifies for stone up to 100 pounds in weight.)

(52) Dundee Quarry, Dundee Cement Company, Dundee, Michigan.

(53) MacRitchie Stone Company Quarry, West Millgrove, Ohio. (Qualifies for stone up to 1,000 pounds in weight.)

(54) Ives Quarry, Vulcan Materials Company, West Pit, Racine, Wisconsin. (Qualifies for stone up to five (5) tons in weight.)

(55) Greenleaf Quarry, Greenleaf, Wisconsin. (Qualifies for stone up to 1,800 pounds in weight.)

(56) Franklin Quarry, Vulcan Materials Company, Milwaukee, Wisconsin. (Upper layer qualifies for stone up to one (1) ton in weight. In lower layer cherty material not acceptable, 6-inch maximum size.)

(57) Roberts Road Quarry, Rockwood Stone Company, Rockwood, Michigan. (3rd lowest ledge.) (Qualifies for stone up to 100 pounds in weight.)

(58) Monroe Quarry, France Stone Company, Monroe, Michigan. (Qualifies for stone up to 100 pounds in weight.)

(59) Bichler Quarry, Escanaba, Michigan. (Qualifies for stone up to three (3) tons in weight.)

(60) Republic Mine Dump, Republic, Michigan.

(61) Groveland Mine Dump, Randville, Michigan.

(62) Lindberg's 480 Quarry, Sands, Michigan.

(63) Cold Springs Quarry, Cold Springs, Minnesota.

(64) Isle Quarry, Isle, Minnesota.

(65) Lannon Quarry, Halquist Stone Co., Sussex, Wisconsin. (Qualifies for stone up to five (5) tons in weight.)

(66) Sussex Quarry, Halquist Stone Co., Sussex, Wisconsin. (Qualifies for stone up to five (5) tons in weight.)

(67) Sussex Quarry, Vulcan Materials Co., Milwaukee Wisconsin.

(Qualifies for stone up to 1000 poundsin weight.)

(68) LaFarge Quarry, Alpena, Michigan (Upper lift only).

(69) Ulland Rock Products, Ulland Bros., Duluth, MN.

(70) Del Zotto Quarry, Del Zotto Manufacturing Co. Duluth, MN.

(71) Buckley Quarry, Wissota Sand and Gravel Co., Superior, WI.

(72) Waterloo Quarry, Michels Materials Engineering Company Co., Waterloo, Wisconsin.

(73) Mosinee (Cisler) Quarry, Mathy Construction Co, Mosinee, Wisconsin.

(74) Tork Quarry, E. Kraemer & Sons, Wisconsin Rapids, Wisconsin.

(75) Baraboo Quarry, Baraboo Quartzite Co, Baraboo, Wisconsin.

(76) Klingemeyer Quarry, E. Kraemer &Sons, North Freedom, Wisconsin.

(77) Straits Aggregate Quarry, Alpena, Michigan. (Cherty or platey stone not acceptable. Qualifies for acceptable stone up to two (2) tons in weight.)

(78) Olson Brothers Quarry, Brule, Wisconsin. (Qualifies for stone up to 2 tons in weight.)

(79) Peter Mitchell Mine, North Shore Mining Co., Babbitt, Minnesota

(80) Dodgeville No. 5 Mine Dump, Houghton, Michigan. (Qualifies for stone up to 100 pounds weight.)

(81) Superior Sand and Gravel, Hancock, Michigan. (Qualifies for stone up to 250 pounds in weight.)

(82) Hayton Quarry, Chilton, Wisconsin.

(83) Grimms Quarry, Grimms, Wisconsin. (Qualifies for stone up to seven (7) tons in size.)

(84) R.N.I.I. Inc. Quarry, Brussels, Wisconsin. (Qualifies for stone up to seven (5) tons in weight.)

(85) Rockland Quarry, Rockland, Michigan, Penska Construction. (Qualifies for stone up to one (1) ton in size.)

(86) Havelka Quarry, Havelka Construction, Wallace, Michigan (Qualifies for stone up to 500 pounds in weight.)

2.1.2.2 Bidding Requirement

Bids shall be based on obtaining stone from any of the sources listed by company name in the above Subparagraph entitled "Listed Stone Material Sources". Bids shall not be based on non-listed sources.

2.1.2.3 Source Potential

The sites listed as potential sources of material have not been

investigated with respect to the availability of specific quantities and sizes of the material required for the project. Listing of sources herein before only indicates that there could be some material in the source, if selected zones and appropriate quarrying techniques are used, that meets all the requirements specified. The listing of sources does not guarantee that the quality or sufficient quantities of materials necessary for this contract are available in any of the sources listed nor does it guarantee that economical production can be obtained from that source.

2.1.2.4 Source Verification

Nothing herein is to be construed as implying that sources listed herein are actually interested in or capable of producing or offering stone in the size, gradation, weights or quantities required or that transportation from the source to the project is available. The Contractor shall verify each source selected for its capability to produce the quantity required of the quality, sizes, gradation or weights specified.

2.1.2.5 Material Suitability

The right is reserved to reject materials from certain localized areas, zones, strata, or channels of any source, when such materials are determined by the Contracting Officer to be unsuitable based upon quality requirements herein. Rejection of any or all material by the Contracting Officer shall not be grounds for a time extension under CLAUSE titled, "DEFAULT (FIXED-PRICE CONSTRUCTION)." Materials produced from a selected source(s) shall meet all requirements specified.

2.1.2.6 Notification

When stone materials are to be obtained from a listed source(s), the source(s) shall be selected and the Contracting Officer notified at least fifteen (15) calendar days in advance of the time the material will be used in the work.

2.1.2.7 Rejection

If the source(s) so designated by the Contractor is not allowed for use by the Contracting Officer, the Contractor may not submit for use non-listed sources, but shall furnish the materials from a source(s) listed herein before subject to concurrence of Contracting Officer and compliance with contract specification requirements at no additional cost to the Government.

2.1.3 Specific Gravity

Since quantity determinations are contingent upon the range of specific gravity (saturated surface dry (SSD) basis) of stone to be supplied, the Contractor shall make an investigation to determine the lowest and highest specific gravity (SSD) of the stone available at the quarry or quarries it proposes to utilize and furnish a copy of the results to the Contracting Officer. Tests shall have been performed in accordance with RTH 107.

2.1.4 Alternate Sources

If it is found during the contract that acceptable materials and quantities of materials cannot be obtained by the Contractor from the source(s) presently being used, the Contractor may request to be allowed to use alternate source(s). If the request is approved, the source(s) to be used shall be selected from the sources listed in Subparagraph, "Sources."

Obtaining and furnishing materials from the alternate source(s) shall be at no additional cost to the Government.

2.1.5 Material Sampling and Shipping

When directed by the Contracting Officer, stone and aggregate shall be shipped to the Government's laboratory for testing for quality prior to the start of placement. Additionally, if before or during the course of the quarry operations conditions are such that, in the Contracting Officer's opinion, testing to ensure the quality of the production material is warranted, the following action shall be taken:

2.1.5.1 Test Samples

Test samples shall be obtained by the Contractor at its expense. Samples selected for testing shall be representative of material formations in the quarry to be used or being used on the project. The Contracting Officer's Representative must be present and approve the selection of all test samples before shipment. The Contracting Officer's Representative may elect to personally select all samples. Samples of stone groupings with a maximum size less than 500 pounds shall contain at least two (2) stones representative of the higher limit of the stone weights specified. In addition, the sample shall be representative of the gradation specified and the minimum weight of the total sample shall be not less than 500 pounds.

2.1.5.2 Shipping Samples

The samples shall be shipped or delivered by the Contractor, at its expense, to the Waterways Experiment Station, 3909 Halls Ferry Road, Vicksburg, MS 39180-6199. Tests performed will be as described in the Subparagraph, "Material Tests."

2.1.6 Material Tests

Tests to which the material will be subjected to will include one (1) or more of the following tests: petrographic examination, specific gravity, abrasion, absorption, wetting and drying, freezing and thawing, soundness, compressive strength, expansion, tensile strength, pulse velocity, gradation, water content, dry unit weight and total porosity, elastic moduli, direct shear and any others determined necessary to assure acceptable material. All tests shall be performed in accordance with the applicable portion of the ASTM C 127, ASTM D 653, ASTM D 2664, ASTM D 2485, ASTM D 2936, ASTM D 2938, ASTM D 3148, RTH 101, RTH 102, RTH 103, RTH 106, RTH 107, RTH 108, RTH 109, RTH 110, RTH 111, RTH 112, RTH 115, RTH 201, RTH 202, RTH 203, and tests listed in Paragraph, "REFERENCES," except some variations of these tests as developed by the Waterways Experiment Station may be used if applicable to local conditions. All tests will be made by, or under the supervision of, the Government and at its expense, except as specified in Paragraph, "QUALITY ASSURANCE." A series of tests on only one (1) separate proposed source or single combination of sources above those listed in the Subparagraph, "Listed Stone Material Sources," will be made at the Government's expense. Further testing shall be at the Contractor's expense.

2.2 MATERIAL QUALITY

All stone shall be of a quality to insure permanence of the structure in the climate in which it is to be used. The stone shall be durable, sound, free from detrimental cracks, blast fractures, seams and other defects

which tend to increase deterioration from natural causes or cause breakage during handling and placing. It shall be highly resistant to weathering and disintegration under freezing and thawing and wetting and drying conditions. Acceptability of stone material will be determined by the Contracting Officer from suitable laboratory tests, visual inspection, and service records. Tests which the material may be subjected to are given herein before in Subparagraph, "Material Tests". Inspection for cracks, fractures, seams, defects, and deterioration shall be made by visual examination. Inclusion of objectionable quantities of dirt, sand, clay, chert and rock fines or other deleterious material will not be permitted. Selected granite, quartzite, rhylolite, traprock, limestones, some dolomitic limestones and certain sandstones will generally meet the requirements of these specifications.

2.2.1 Specific Gravity Range

All stone shall have a minimum specific gravity of 2.50 and a maximum specific gravity of not more than 2.90 based on water having a unit weight of 62.4 pounds per cubic foot.

2.2.2 Stone Dimensions

The least dimension of any piece of stone shall not be less than one third of its greatest dimension.

2.3 QUARRY OPERATIONS AND HANDLING

Quarry operations shall be conducted by the Contractor/Supplier in a manner that will produce stone conforming to the requirements specified and may involve handling, processing, blending, and loading as necessary. Blasting and handling of rock shall be controlled by the Contractor/Supplier to produce rock of the size ranges and quality specified. Techniques such as the use of proper hole diameter, hole depth, hole angle, burden and spacing distances, types and distribution of explosives, delay intervals and sequence, removal of muck piles between each shot, and special handling techniques will be required as necessary to produce the specified materials. All aspects of blasting operations shall be specifically designed so that the end product is not damaged from the blasting technique and that the stone is suitable for the intended purpose. Stone in excess of 500 pounds each will not be accepted from material which was blasted from the face of the quarry during the period of 15 September to 1 May for quarries located above 43 degrees North latitude and 1 October to 1 May for quarries located below 43 degrees North latitude.

2.3.1 Temporary Storage

Storage of stone materials subsequent to shipment from the quarry and prior to permanent placement in the required work shall be subject to approval of the Contracting Officer. Underwater storage of stone materials is prohibited.

2.4 GRADATION

Material having the gradations listed below shall be placed in the work at locations shown on the drawings. Gradation limits are in-place requirements. Adjustments in production and placing methods shall be made as necessary to assure final placed materials are within specified ranges.

2.4.1 Riprap Stone

The stones furnished for riprap shoreline protection shall be rough angular in shape and shall weigh between 30 pounds and 300 pounds each, shall be free of fines and shall be well graded within the following limits:

Stone Weight in Pounds	Percent Lighter by Weight of Total Mixture
300	90 - 100
100	25 - 40
30	0 - 5

2.4.1.1 Quarry Run Limestone Core

Quarry Run limestone provided for the limestone core shall be well graded within the following limits:

Mean Diameter	Percent Lighter by Weight of Total Mixture
6.0 inches	85-100
3.0 inch	50-70
0.50 inch	15-40
0.02 inch	0-15

2.4.2 Surface Course

Surface Course gradation will be 22a Limestone to MDOT (1990) Standard Specifications for Construction.

PART 3 EXECUTION

3.1 PLACEMENT

3.1.1 General

All materials shall be placed uniformly within the slope lines and grades indicated on the drawings or as directed by the Contracting Officer. Material shall be placed by equipment capable of handling materials of the size specified.

3.1.1.1 Placement of Riprap on Geotextile

In areas where geotextile is shown to be placed, the geotextile shall be in place prior to placement of the stone thereon. Placement of the geotextile is specified under SECTION 02378, "GEOTEXTILES USED AS FILTERS." The riprap shall be placed on the geotextile with care so as not to rupture the fabric and shall not be dropped from a height greater than one (1) foot. During placement of stone, any damage to the fabric shall be repaired in an approved manner by the Contractor, at no additional expense to the Government.

3.1.2 Debris

Any timbers, unsatisfactory material and debris within the reaches of construction shall be removed except as otherwise directed by the Contracting Officer, and upon removal shall become the property of the contractor. All materials shall be properly disposed of in conformance with the requirements of SECTION 01130, "ENVIRONMENTAL PROTECTION" including any

applicable local requirements.

3.1.3 Limitations of Placement Procedures

Stone construction in advance of completed permanent protection except as specified herein shall be at the Contractor's risk. The Contractor shall keep the Contracting Officer advised as to any and all situations that may result in a possible interruption of work. Riprap placement shall advance in consecutive construction segments not to exceed 100 feet in length.

3.1.4 Quarry Run Limestone

Quarry Run limestone shall be placed in a manner to avoid displacing or placing undue impact force on underlaying materials and supporting subsoils. The Quarry Run limestone shall be placed in a manner to produce a resultant graded mass of stone with minimum voids. Placement by any method which is likely to cause segregation of the various sizes will not be permitted. Unsegregated stone shall be lowered in a bucket or container and placed in a systematic manner directly on the underlying material. Final finish of the slope shall be performed as the material is placed.

3.1.5 Riprap Stone

Stone shall be placed to a full zone thickness in one operation in a manner to avoid displacing the underlying material or placing undue impact force on underlying prepared limestone or geotextile filter layer and supporting subsoils. The riprap shall be placed in a manner to produce a resultant graded mass of stone with minimum voids. Rearranging of individual stones may be required to achieve this result. Placement by any method which is likely to cause segregation of the various sizes will not be permitted. Unsegregated stone shall be lowered in a bucket or container and placed in a systematic manner directly on the underlying material. Placement shall begin at the bottom of the slope and proceed upward. Casting or dropping of stone over (1) foot or moving by drifting or manipulating down the slope will not be permitted. Final finish of slope shall be performed as the material is placed.

3.1.6 Surface Course

Surface Course limestone shall be placed in a manner to avoid displacing or placing undue impact force on underlaying materials and supporting subsoils. The Surface Course limestone shall be placed in a manner to produce a resultant graded mass of stone with minimum voids. Placement by any method which is likely to cause segregation of the various sizes will not be permitted.

3.1.7 Slides

In the event of the sliding or failure of any part of the structure during its construction, or after its completion, but prior to its acceptance, the Contractor shall, upon written order of the Contracting Officer, cut out and remove the slide from the structure and then rebuild that portion of the structure with new materials or reuse the displaced materials for rebuilding if deemed appropriate. The Contracting Officer shall determine the nature and cause of the slide. In case the slide is caused through fault of the Contractor, the foregoing operations shall be performed without cost to the Government.

3.1.8 Tolerances

The finished surface and stone layer thickness shall not deviate from the lines and grades shown on the contract drawings by more than the tolerances listed below. Tolerances are measured perpendicular to the indicated neatlines. Extreme limits of the tolerances given shall not be continuous in any direction for more than five (5) times the nominal stone dimension nor for an area greater than 100 square feet of the structure surface.

NEATLINE TOLERANCES

Stone	Above Minimum Thickness (Inches)
Quarry Run Limestone	3
Riprap	6
Surface Course	0.5

The intention is that the work will be built generally to the required elevations, slope and grade and that the outer surfaces shall be even and present a neat appearance. Placed material not meeting these limits shall be removed or reworked as directed by the Contracting Officer. Excess material permitted to remain in place by the Contracting Officer will not be paid for.

3.2 QUALITY CONTROL

3.2.1 General

The Contractor shall establish and maintain quality control for all work performed at the quarry or quarries and the job site under this Section to assure compliance with contract requirements. It shall maintain records of its quality control tests, inspections and corrective actions. Quality control measures shall cover all materials, equipment, tests and construction operations including but not limited to the following:

a. Testing and inspection during start up operations and during production of materials for rock quality, weights or sizes and gradations of stone materials. Adjustments shall be made in methods and/or procedures as necessary to provide "in-place" stone materials in sizes conforming with the contract requirements.

b. Placement of all materials to the slope and grade lines shown on the contract drawings and in accordance with this Section of the specifications.

c. Conducting all operations in compliance with the requirements of SECTION 01130, "ENVIRONMENTAL PROTECTION".

d. Observance of safety regulations.

3.2.2 Check Survey

Surveys made by the Contractor are required on each material placed for determining that the materials are acceptably placed in the work. The Contractor shall make checks as the work progresses to verify lines, grades and thicknesses established for completed work. At least one (1) check survey as specified below shall be made by the Contractor for each twenty-five (25) foot section as soon as practicable after completion.

Following placement of each type of material, the cross section of each step of the work shall be approved by the COR before proceeding with the next step of the work. Approval of cross sections based on check surveys shall not constitute final acceptance of the work. Cross sections shall be taken by the Contractor on lines twenty-five (25) feet apart, measured along the construction baseline, with readings at five (5) foot intervals and at breaks along the lines. However, other cross section spacings and reading intervals may be used if determined appropriate by the COR Additional elevations and soundings shall be taken as the COR may deem necessary or advisable. The surveys shall be conducted in the presence of an authorized representative of the Government, unless this requirement is waived by the Contracting Officer. Contractor's check surveys may be used for final quantity surveys, pursuant to, CLAUSE entitled QUANTITY SURVEYS, subject to the approval of the Contracting Officer.

3.2.2.1 Above Water

The elevation of stone above the water surface shall be determined by the use of a leveling instrument and a rod having a base twelve (12) inches in diameter. Other means, if approved by the Contracting Officer, may also be used.

3.2.2.2 Below Water

For portions of the work that are under water, sounding surveys shall be performed either by means of a sounding pole or a sounding basket weighing about 8-1/2 pounds, each of which has a base measuring twelve (12) inches in diameter.

3.2.3 Quarry Test, Inspection and Samples

3.2.3.1 General

All tests specified herein shall be performed by, and at the expense of, the Contractor as part of its "Quality Control Program". Samples for testing shall be selected by the Contractor with the concurrence of the Contracting Officer's Representative. Tests shall be made as specified below and any adjustments to the Contractor's operation necessary to provide material meeting contract requirements shall be at the Contractor's expense. Stone materials which do not meet these specification requirements shall be separated to assure they do not get mixed in with acceptable materials.

3.2.3.2 Pre-production Testing

Stone materials produced during start-up operations at the quarry shall be tested and evaluated for quality, weight and gradations as required to assure compliance with the specifications. Three (3) consecutive tests shall pass all requirements, and be witnessed by the Contracting Officer's Representative, prior to full production operations or shipment of any material to the project site.

3.2.3.3 Quarry Samples

Prior to delivery of any stone to the job site and after pre-production testing is complete, the Contractor's inspector and the Contracting Officer's Representative shall meet at each quarry designated to supply stone material and select stones, with required weight, to be set aside at

the quarry as reference samples of the materials to be shipped to the project site. These samples shall be retained until completion of the project. Samples shall consist of at least one (1) stone representing the minimum, average and maximum weight of each size range in the gradation. Basic quarry material inspections shall be provided by the Contractor as part of its "Quality Control Program".

3.2.3.4 Production Testing

Production quality control tests shall be performed at the quarry prior to shipment of materials to the project site and shall be performed at regular intervals throughout the project construction. Tests which do not pass are not counted toward the number of tests required. Production testing may be increased as necessary to maintain quality control when directed by the Contracting Officer's Representative. Increased production testing shall also be at the Contractor's expense. Samples for production testing shall be taken from materials as they are produced. The following minimum tests are required.

Stone	Type of Test	Minimum Size of Sample/Test	Minimum Number of Tests
Quarry Run Limestone	Gradation Visual Measurement Weight	4 tons	1
Riprap	Gradation Visual Measurement Weight	4 tons	2
Surface Course	Gradation	500 Lbs.	2

3.2.4 Project Site Inspection and Tests

At the project site, visual inspections shall be made of all materials for size, gradations, fractures, etc., to assure that handling during loading, transporting, unloading and placement does not cause damage to the materials and to assure they are placed in accordance with the requirements of this Section. Any material broken, cracked, out of gradation or weight limitation or improperly placed in the work shall be removed and replaced with new stones or corrected as directed by the Contracting Officer at no additional expense to the Government.

3.2.5 Retests

The Government reserves the right to test or retest any of the material produced from the sources listed or used on the project at Government expense.

3.3 QUALITY ASSURANCE

During the contract period, both prior to and after materials are delivered to the job site, visual inspections of the stone materials may be performed by the Contracting Officer. If the Contracting Officer, during the inspections, suspects that the stone quality, gradation or weights of stone being furnished are not as specified, supplemental sampling and testing by

the Contractor shall be required. Samples of the delivered stone for testing and the manner in which the test is to be performed shall be as directed by the Contracting Officer. This additional sampling and testing shall be performed at the Contractor's expense when test results indicate that the materials do not meet specified requirements. When test results indicate that materials meet specified requirements, an equitable adjustment for the sampling and testing will be made in accordance with the CLAUSE titled "CHANGES." Any material rejected shall be removed from the job site at the Contractor's expense.

-- End of Section --